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THE

TRUTH OF THE BIBLE.

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THE

TRUTH OF THE BIBLE:

EVIDENCE FROM THE MOSAIC AND OTHER RECORDS OF CREATION; THE ORIGIN AND ANTIQUITY OF MAN; THE SCIENCE OF SCRIPTURE; AND FROM THE ARCHÆOLOGY OF DIFFERENT NATIONS OF THE EARTH.

BY THE

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'The WORD of the LORD is right; and all his WORKS are done in truth.' PSALM xxxiii. 4.

'I have shewed thee new things from this time, even hidden things, and thou didst not know them.' ISAIAH xlviii. 6.

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PREFACE.

In publishing this work on the Truth of the Bible, the object of which is to show the existing harmony between Scripture and Science, I would fain preface it with a few remarks on the use of certain terms which will be met with occasionally in the following pages.

A distinguished writer[1] of the present day has very justly condemned the too frequent employment of such epithets as 'Atheist, Pantheist, Infidel, Socinian, Rationalist, Neologian, blasphemer, dishonest, abominable, fiend, instrument of Satan,' &c. &c., when speaking of those from whom we are compelled to differ, not only as regards the right interpretation of Scripture, but more especially in their manner of treating the same.

Careful as I have been to avoid everything like abuse of those whose opinions on Biblical subjects are different from my own, I submit that it is impossible to avoid occasionally using some of the least objectionable terms in the category mentioned above; at the same time I purposely disclaim using them in anything like an offensive sense. *E.g.* I understand the term 'Neologian' to be descriptive of one who treats *religion* as the learned in the present day treat *science*, under a *new*

[1] See an article in the *Contemporary Review* by the Dean of Westminster, vol. i. p. 540.

aspect; and different from the way in which it has been viewed by Christians for the last eighteen centuries. By the term 'Rationalist' it is neither unfair nor uncourteous to apply it to those who place reason on a par with, or above, revelation in their mode of handling Scripture, though they will probably deny that those portions of the Bible which they question and criticise are a 'revelation' in the ordinary sense of the word.

If the term 'Infidel' be met with in the following pages, I pray the reader to understand that it is not used in the same sense as that of 'atheist.' The two terms, though often most erroneously used as synonymous, are in truth essentially different. By the former I understand one who denies to Scripture the infallibility, or supremacy in all things treated of therein, with which the Church of God, both of the Old and New Covenant, has regarded it from the beginning. By the latter, as it can only be applied to those who deny the existence of the Supreme Being, it would be manifestly improper to employ such a term towards those who believe that 'God is' as much as we do ourselves.

If it be possible, without any infraction of that heaven-born principle with which it becomes us to conduct all controversy, and which, as the Apostle says, 'covereth all things,' to assign a reason for so many in the present day questioning and denying THE TRUTH OF THE BIBLE, I think it may be traced to want of early training, and a deficiency of study of the *letter* of Scripture on the one hand, as well as to the absence of a right faith which alone inclines the heart to a reception of the *spirit* of Scripture on the other. For, as St. Bernard says, 'The study of God's word and the mere reading of it, differ as much as the friendship of such who every day converse

lovingly together doth from the acquaintance with a stranger at an inn, or a casual acquaintance whom he salutes in the street.' So likewise what St. Augustine remarked concerning a spiritual understanding of the 119th Psalm is equally applicable to the whole of the Bible, from the first chapter of Genesis to the last page of the Revelation—'The more open it seemeth, the deeper it seemeth to me; so that I cannot even show how deep it is.'

It is therefore in the spirit of *Love*, and with such an effective weapon of controversy, that we may best hope to succeed in convincing those with whom we are at issue, in accordance with the advice so happily expressed by George Herbert:—

> Be calm in arguing, for fierceness makes
> Error a fault, and truth discourtesy.
> Why should I feel another man's mistakes
> More than his sickness or his poverty?
> In love I should; but anger is not love,
> Nor wisdom neither; therefore gently move.
> Calmness is great advantage: he that lets
> Another chafe, may warm him at *his* fire,
> Mark all his wanderings and enjoy his frets;
> As cunning fencers suffer heat to tire,
> Truth dwells not in the clouds: the bow that's there
> Doth often aim at, never hit, the sphere.

I would therefore fain hope to have caught the excellent spirit which pervades the writings of a leader in that school of religious thought, which it is the object of the present work to controvert, as the following solemn words may show:—'Who,' asks Professor Jowett (now Head of Balliol) in his work on *The Epistles of St. Paul*, ii. 595, 'as he draws near to Christ in the face of death, will not feel himself drawn towards his theological opponents? At the end of life, when a man looks

back calmly, he is most likely to feel that he exaggerated in some things. . . . The truths about which we are disputing cannot partake of the passing stir: they do not change even with the great revolutions of human things. They are in eternity, and the likeness of them on earth is to be found, not in the movement on the surface but in the depth of the silent sea. As a measure of the value of such disputes, we may carry our minds onwards to the invisible world, and there behold as in a glass the great theological teachers of past ages, who have anathematised each other in their lives, resting together in the communion of the same Lord.'

All thoughtful persons must have welcomed with satisfaction the statement made by so acknowledged an authority as Sir John Lubbock at the Liverpool meeting of the British Association in 1870, that there is 'no opposition between Science and Religion,' if by the term *Religion* he means the same thing as *Revelation*; for it puts to shame the hasty assertions of Bishop Colenso, that 'The Bible and Science are opposed to each other,' and 'The elementary truths of Geological Science flatly contradict the accounts of the Creation and the Deluge.' To such unfounded dogmas, so unworthy of the author's position as a professed Minister of the Gospel of Truth, we can confidently make this reply, that not a single fact of science fully ascertained has ever yet been shown to be in opposition to a single statement of Scripture rightly understood.

Religion, as I sincerely believe, has nothing to fear but everything to hope from the progress of real Science, as they are both beams of light from the same sun of eternal truth. The Book of Nature and the Book of Revelation equally lie open to our inspection. God has

endowed us with faculties by which we can interpret the one, and has given us His Spirit to enable us to comprehend the other. By making Science the handmaid of Religion, instead of its opponent, as too many are inclined to do in the present day, we shall the more readily discern the perfect harmony between the two, as a modern author has justly said:—

'Science has a foundation, and so has Religion. Let them unite their foundations, and the basis will be broader, and they will be two compartments of one great fabric reared to the glory of God. Let the one be the outer, and the other the inner court. In the one, let all look and admire and adore; and in the other, let those who have faith kneel and pray and praise. Let the one be the sanctuary where human learning may present its richest incense as an offering to God, and the other, the holiest of all, separated from it by a vail now rent in twain, and in which, on a blood-sprinkled mercy-seat, we pour out the love of a reconciled heart, and hear the oracles of the living God.'

B. W. S.

November 1870.

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THE

TRUTH OF THE BIBLE.

VARIATIONS IN SCIENCE.

CHAPTER I.

THE Bishop of Exeter, in his Essay on 'The Education of the World,' observes:—

> Physical science, researches into history, a more thorough knowledge of the world we inhabit, have enlarged our philosophy beyond the limits which bounded that of the Church of the Fathers. And all these have an influence, whether we will or no, on our determinations of religious truth. There are found to be more things in heaven and earth than were dreamt of in the patristic theology. God's creation is a new book, to be read by the side of His revelation, and to be interpreted as coming from Him. . . . In learning this new lesson, Christendom needed a firm spot on which she might stand, and *has found it in the Bible*. . . . He is guilty of high treason against the faith, who fears the result of any investigation, whether philosophical, or scientific, or historical.—*Essays and Reviews*, pp. 44, 47.

Cordially agreeing with the Bishop's statement, that 'God's creation is (to us) a new book, to be read by the side of His revelation and to be interpreted as coming from Him,'—in other words, that there can be no difference between the Book of Nature and the Book of Life,—the object of the present work is to meet the arguments of those who are unable to discern the perfect harmony between the two—who ignore the 'firm standpoint' on which Christendom has rested for so many ages, and who imply that every fresh investigation into which we are led by the progress of modern discovery only tends to show the wide divergence between science and faith.

Only let the investigation be conducted on the principles of justice and truth; and we shall be satisfied with Dr. Buckland's conclusion, that if 'superficial geological investigations lead the mind *from* the Holy Scriptures, thorough investigations lead it *back*.' For we are warranted in maintaining that the first great condition of every sort of knowledge is a proper regard for the Bible itself. If we are once tempted to place in thought the finite on a par with the infinite, or reason before revelation, and to forget the abiding presence of Him who soars above all philosophy, we speculate and conjecture and doubt, and are 'in wandering mazes lost.' But when the BIBLE opens out the highest truths which concern our race for time and eternity, and teaches us what we must do to be saved, all secular knowledge, which, as Cowper says, is the mere material with which wisdom builds, ranges itself lower down in the scale and assumes its proper position, instead of floating loosely amidst the vague speculations of the human mind.

Before entering upon the consideration of some of these vague speculations, and the extraordinary variations which exist amongst the professedly wise on almost every department and every detail of modern science, we must lay down this axiom at the outset, and challenge every opponent to its disproof,—that not a single fact fully ascertained, has ever yet been shown to be in opposition to a single statement of Scripture, rightly understood. On this it behoves us to take our stand, for this we most earnestly contend, that there never has been and never can be the slightest divergence between the statements in revelation and the discoveries of modern science; in other words, between the Oracles and the Works of God. If both parties—that is, the harmonists and their opponents—would only agree to this, we should form a better estimate of each other's creed, and be more likely to approximate to the real opinions entertained by both in the end.

In treating on this subject I cannot forbear from quoting the touching appeal which Professor Jellett made to the Church Congress, held in Dublin A.D. 1868, in his address on 'The Influence of the increased Investigation of Physical Science on the Religious Views of those engaged

in such Enquiries and on Theology in general.' After dwelling upon the great danger to be apprehended from the present mutual relations of Science and Theology, which he pronounces to be '*mutual isolation*,' he justly declares—

> If thinkers be divided into two isolated bodies, neither of whom will listen to the reasoning of the other, their contests can be nothing but mutual invective, the necessary effect of which is to close the mind of each party against the portion of truth possessed by the other.

Against such an unwise course he warns his clerical brethren, appealing to them in the following touching words, to which we shall do well to take heed:—

> I ask you to place yourself in the position of those who, in their pursuits and habits of thought, may be said to belong to two worlds —the world of science and the world of theology. I ask you to believe, that there are in the world of science—even amongst those whom you regard as fatally astray—men who entered on the career of enquiry with a devotion to truth as pure as ever yours was. I ask you to believe, that in the world of science there are men who would welcome *that* as the brightest dawn of their lives which should scatter the perplexities that cloud their horizon now, in whose light they should be able to read that the writing of God in the book of Revelation holds the same language as the writing, not less His, in the book of Nature. And I ask you, in the name of that highest charity which is also the highest justice, to abstain from those wholesale bitter and senseless denunciations of 'the puny arrogance of human science,'—'the petty conceit of human philosophy,' which are to be heard in so many a pulpit, on so many a platform. I ask it of you, as you would not drive from the Gospel of Christ men who seek no higher blessing than to be convinced of its entire truth. I ask it of you, as you would draw from the march of science—which you cannot arrest—all the benefit, which it may well give you. And I ask it of you, as you would hasten the advent of that day, for which we pray as fervently as you do, and distant as it may seem now, that day will come—when men shall learn that Science and Revelation lead to the same haven—the day when those mighty streams, which seem now to flow in parted channels, shall pour their united waters into the one great ocean of truth.

While we express our earnest hope that both parties may alike benefit by the eloquent peroration with which Professor Jellett concluded his admirable address on the proper connection between Science and Revelation, at the same time we may contend, in a Christian spirit, not only for The Truth of the Bible in all the various subjects dogmatically stated therein, or fairly to be inferred there-

from, but also it behoves us to show, that the variations of science, or rather differences amongst those who claim to be scientific men, are so great and so numerous, that it necessarily lessens our confidence in their opinions. When, therefore, we find the *Saturday Review* declaring that—

> If any new proposition comes with the authority of an established professor of the science, *we accept it with the confidence with which a Roman Catholic might take the decision of the infallible Church*——

Or others, who are content to accept any opinion or hypothesis without difficulty or investigation, so that it be only dignified with the name of science, proclaiming that we should regard every scientific dictum 'as an oracle,' we are constrained to ask, how we are to accept the oracle *when it speaks in different senses*? That it does so will be our object now to show.

We must, however, premise, that there is this distinction between the teachings of Scripture and Science. The Bible claims to be the work of One, who is the Infinite, the Eternal—the Omniscient God—and who inspired 'holy men of God to speak as they were moved by the Holy Ghost;' so that its teaching must not only be uniform in all its parts, but also, on whatever subject it treats, essentially and perfectly true.

When, therefore, we read of such assertions as these: 'The facts revealed by modern Science are utterly irreconcilable with Scripture statements,'—or as Bishop Colenso asserted, in a lecture delivered at the meeting of the *Anthropological Society*, May 16, 1865, that 'the elementary truths of Geological Science flatly contradict the accounts of the Creation and the Deluge,'—we can only lament the blindness of those who make such a parade of their knowledge, while at the same time they are unconscious of the ignorance which they betray. For these hasty conclusions, so far from showing the discord between Science and Scripture, only prove the impossibility of the finite comprehending the wisdom of the Infinite. Nay, is it not an abuse of terms to call that 'Science' which contradicts the plain teaching of the Word of God? What a misnomer to claim that honoured title for some of the theories which are proposed for our

acceptance—then adopted by the 'professedly wise'—then applauded by the world at large, until refuted by subsequent and deeper investigations into the Book of Nature, and then pass away

> Like the baseless fabric of a vision,
> Which leaves not a wreck behind.[1]

Why is this? Because men fondly imagine that they may treat the BIBLE as an old almanack, and that the progress of Science in the present day is sufficient to overthrow the supremacy of the Divine Word. Instead of treating Theology as the Queen of Sciences, and Philosophy as the handmaid of Religion, according to the teaching of Bacon, they are apt to disregard his principles altogether; and hence Science has now become of that speculative nature which we so often find it to be. But what says the great Philosopher of the sixteenth century?

Let no one expect any great progress in the sciences (especially their operative part) unless natural philosophy be applied to particular sciences, and they again be referred back to natural philosophy. For want of this, astronomy, optics, music, many mechanical arts, medicine itself, and what perhaps is more wonderful, moral and political philosophy, and the logical sciences, *have no depth, but only glide over the surface and variety of things*; because these sciences, when they have been once partitioned out and established, are no longer nourished by natural philosophy. . . . But we can little wonder that the sciences grow not when they are separated from their roots.—*Novum Organ.* i. § 80.

And again, the same 'acknowledged' authority observes:—

Generally let this be a rule, that all partitions of knowledges be accepted for lines and veins, than for sections and separations; and that the continuity and entireness of knowledge be preserved. For the contrary hereof hath made particular sciences to become *barren, shallow, and erroneous*, while they have not been nourished or maintained from the common fountain. — *Advancement of Learning*, Book II.

And so a modern Philosopher, the late Professor Waitz of the University of Marburg, in his *Introduction to Anthropology*, observes:—

[1] The Rev. G. Henslow, in a paper read at the *Victoria Institute*, observes:—'All startling and new theories pass through three stages of *ridicule, examination*, and *acceptance*;' but he has omitted to notice a fourth stage, viz., that of *retraction*, as will be seen is so often the case, when the result proves that they are not 'found reconcilable with truth.'—*Journal of Transactions*, iv. 262.

In Germany it is at present a common case, that in the fields of the various sciences, and even within the limits of a single science, *opposite theories grow up, without their respective propounders taking any notice of one another's views or making any attempt to reconcile their contradictory dogmas.* The strength of party comes in place of strength of reasoning; and the labour of giving scientific proofs seems superfluous, where deference is merely yielded to the authority of those who, agreeing in some general principles, appear to support one another with the instinctive interest of an *esprit de corps.*

Far be it from us to attempt to depreciate the investigations of learned men in any of the paths of Science which it is their taste and inclination to pursue. But we are warranted in pointing out that the rash speculations, the endless variations, and the perpetual oscillations of what is often too hastily dignified by the name of Science, may be traced to the systematic neglect of the true principles of the Baconian philosophy. It may be truly said of such variations that their name is legion, and it will be my aim to show that they are of such a nature as to preclude our yielding to them any deference, from the fact that there is so much confusion, such a Babel of tongues amongst the *savans* of the present day, that it is difficult to know which to choose, or where scientific truth is to be found.

It is not quite two centuries since Burnet, one of the most learned men of his age, published his *Sacred Theory of the Earth*, which he stated boldly, contained an 'account of the Originals of the earth, and of all the general changes which it hath undergone, *or is to undergo*, till the consummation of all things!' Many of the learned in Burnet's time believed Paradise, where Adam dwelt, was in the air, somewhere between the earth and the moon. Burnet set himself to correct this false notion, and confidently maintained that it was on the earth, in the Southern hemisphere near the equinoctial line, though not where the Bible places it. This gave Butler occasion to select this conceit as a fair mark for satire, when, amongst the numerous accomplishments of *Hudibras*, he says:—

> He knew the seat of Paradise,
> Could tell in what degree it lies;
> And, as he was disposed, could prove it
> Below the moon, or else above it!

Although Buffon subsequently declared that Burnet's work was only an historical romance, it was treated as a

work of profound science in his own day, and was celebrated by Addison in a Latin ode, while Steele praised it in the *Spectator*.

We must proceed now to consider some of these *Variations in Science*, under the different heads of Astronomy, Geology, Anthropology, Egyptology, and Theology.

ASTRONOMY.

It is undeniable, that for 5,500 years (assuming the truth of the Biblical date for the age of man) the scientific world, with the exception of Pythagoras, Aristotle, and a few others who appear to have had some misgivings on the subject, were convinced of the truth of the *Ptolemaic* system, until Copernicus made his grand discovery, and then it was brought to believe *exactly the reverse*. Here was a great fact, which, although incidentally referred to in the Bible, as will be seen in our chapter on the *Science of Scripture*, the intellect of man had not been able before to find out, notwithstanding his advanced age (millions of years, according to some of our speculative philosophers), and the truth of which the veriest tyro has not now the slightest doubt.

The same may be said of Newton's discovery of the law of gravitation,[1] for though there are disputes amongst the learned respecting its application, there are none concerning the existence of the law itself. This may be seen in

[1] There is this curious fact respecting Newton's discovery of the *law* of gravitation. At one period of his investigations it must have been to him a mere conjecture, but as it fulfilled this and that requirement, it became more and more probable. But as the great philosopher continued his investigations into the details of the moon's motion—in which he omitted one term that he thought insignificant—he erred in the rate of the motion of the apse of her orbit. The result of the calculation was about half what it ought to have been, and what observation proved it to be. What was Newton's opinion of this? He still believed the law of gravitation, for it solved everything but this one case. Here the *manus emendatrix Dei* was brought in, and Sir Isaac, for a time, believed that God's own direct interference made the apse move twice as fast as it ought to have done by the law of gravitation. The error in the omission of the term, thought to be small, was soon pointed out by Clairaut; and when it was restored to the calculation, all came out right, and the law was established upon a sound and true foundation.

the discovery of the planet Neptune by those distinguished Astronomers, Adams and Le Verrier, whose calculations of the position of the planet which caused the perturbations of Uranus, dependent as they were upon the application of the law of gravitation, did not by any means agree. From the *Report on the History of the Discovery*, published at Washington in 1850, it appears that Adams and Le Verrier did not arrive at the same position of the planet —that the discrepancies in the calculated elements of that planet were considerable—that the planet Neptune, when found, was not in the place assigned to it by either of its discoverers; and finally, that the elements of the orbit of Neptune, as determined from observation, differ so much from those calculated by Adams and Le Verrier, that they cannot be made to agree with either.[1]

But how different is the case in regard to other matters on which the learned have been speculating with increasing boldness, notwithstanding the numberless errors, especially in the science of Geology, which time has brought to light. Take, for example, what is termed the *Nebular hypothesis*, which, until within the last quarter of a century, was unhesitatingly accepted by the scientific world under the influence of such great names as Hutton, La Place, and Herschel, when Professor Sedgwick, in reply to Dean Cockburn's challenge after the York meeting of the British Association in 1844, stated that he 'declined to support the Nebulous theory.' The theory of there being

[1] Mr. Reddie, in a paper read at the *Victoria Institute*, March 18, 1867, has given an account of the discrepancies between the two in the following tabular form:—

	Theoretical		Actual
	Adams	Le Verrier	Walker and Pierce
Mass of Neptune .	1/6,666	1/9,322	1/19,840
Eccentricity . .	0·12062	0·10761	0·00872
Mean distance from sun . . .	37·247	36·154	30·037
Period of revolution .	...	217·378 years	164·618 years
Longitude of perihelion . . .	299°·2	284°·7	47°·2

Journal of Transactions, ii. 69.

a cloud of luminous matter circling round a centre, and in process of time cooling down into a solid globe like our own, was long in full vogue amongst our *savans*, notwithstanding the adverse opinion of the most devout, whose hearts, to use the fine metaphor of Nichols, 'swell with that humility which is the best homage to the SUPREME,' who believed that, in due time, all the nebulæ would be resolved into clusters of stars, if sufficient telescopic power could be obtained, an idea which has been fully realised by the use of Lord Rosse's matchless telescope; and thus, as Professor Nichol, in his *System of the World*, remarks, 'doubt and speculation on this great subject vanished for ever!'

Respecting the *Milky Way*, the opinion hitherto held by astronomers represents it as an enormous ring of stars, near the internal edge of one part of which is our own sun. Mr. Proctor, in his work *Other Worlds than Ours*, advocates the view that the Milky Way is not a ring, but a meandering wisp of nebulæ and stars of all magnitudes.

In the same work Mr. Proctor adduces good reasons for maintaining that Sir W. Herschel's method of judging of the probable distance of stars by their apparent magnitude is *altogether erroneous*, thus striking at the root of the argument for the great distance of those nebulæ which have yet to be resolved. Moreover, this author adopts what may be called the *Meteoric* theory respecting the development of the solar system, in contradistinction to that which was so long and fondly held by the scientific world, viz., the *Nebular* theory.

So as regards the theory respecting *the Motion of the Solar System in space* propounded by Sir William Herschel, and long upheld by astronomers as true science: it has been recently assailed as untenable, and is now pronounced by the Astronomer Royal to be in 'doubt and abeyance.'

Again, with reference to the *Sun's mass*, recent theories put forth by Professor Thomson and others are utterly irreconcilable with the Nebular hypothesis, the one making it 1,000 times greater, the other 350,000 times, than the bulk of the earth. And as regards the way by which the Sun's mass is constantly sustained in order to meet what it loses by radiation, whereas Newton and others

believed that it was accomplished by comets and meteoric matter falling into the Sun, thus supplying the required fuel for its continuance, Mr. E. W. Brayly, F.R.S., who once wrote in favour of that idea, has now turned round and proposed another theory, as diametrically opposed to it as any two cosmical theories can possibly be. Mr. Brayly contended, that the Sun was not only the centre of the solar system, but the sole source whence the planets were drawn. Instead of the Sun being fed with meteors to keep it from burning out, Mr. Brayly's theory makes the Sun, in rotating rapidly on its axis, throw off meteoric bodies from which the earth and planets were probably formed!

So, with reference to a recent discovery by Professor Adams respecting the *Acceleration of the Moon's Mean Motion*, which necessarily effects the calculation of all ancient eclipses,[1] it is a singular fact that, at the discussion on this subject, which took place at the British Association Meeting at Oxford, in 1860, it was found that there were three great mathematicians, Professors Airy, Adams, and the late Sir John Lubbock on the one side, with three equally distinguished names, MM. Plana, Pontecoulaut, and Hausen on the other; while, strange to say, it is admitted by the English mathematicians that, though Adams's theory is right, all the calculations come out more accurately when the Sun's influence upon the Moon is omitted, which it certainly should not have been, if the Moon be subject to the Sun's attraction.

Furthermore, it is notorious how greatly the scientific world has been divided on the subject of *Light*, between the emission theory of Newton, and the undulatory theory of Huygens, which will be further noticed in the next chapter, though Sir John Herschel would fain unite the two, by considering that, as in both these theories, an undulatory or wave motion is admitted, and both explain most of the phenomena known to exist in light, therefore we may have faith in both, without giving an exclusive preference to either.

[1] In a letter which Professor Adams was kind enough to send me in reply to a question on this subject, he says that this theory, if confirmed, has no effect in disturbing the accepted chronology, as, e.g., that of the Peloponnesian war, which is partly proved by eclipses of the period.

GEOLOGY.

If the differences be such amongst Astronomers, in certain details, as noticed above, far more numerous and more marked are the variations of Science in respect to Geology, as we shall endeavour now to show.

Let the following *fact* speak for itself. At the commencement of the present century, the French Institute had no less than eighty different geological theories brought before them, all hostile to Scripture, yet not a single one has stood the test of time and subsequent research, as M. Pauchaud points out :—

> Depuis l'époque de Buffon les systèmes se sont élevés les uns à côté des autres en si grand nombre, qu'en 1806 l'Institut de France comptait plus de quatre-vingts théories hostiles aux saintes Écritures. Aucune n'est restée debout jusqu'à ce jour.—*La Bible et la Science moderne*, p. 13.

Hence, it is not surprising to find geologists disputing about the origin of the earth, whether it is to be traced to *fire* or *water*. The fierce discussions between the Vulcanists and Neptunists at the close of the last century, present a striking instance of variations in Geological Science. The one party, fixing their attention on the basalts, traps, and granites, held that the configuration of the earth's surface was due to the agency of *fire*; while the other party, finding everywhere hardened sand and mud filled with organic remains, contended that the whole of the land was a deposit from *water*; and each one insisted that the opinion of his party was the only right one, until a third school arose, which proved that, in the multifarious strata of our globe, both agencies must be recognised.

Another variation in Science has passed over the geological mind concerning *Granite*, both in respect to its age and composition. Whereas once it was universally considered to form the foundation of the earth's crust, and to be of *igneous* origin, now it is pronounced to be of *aqueous* origin. Hence we find Sir Charles Lyell, in the new edition of his *Principles of Geology*, saying :—

> The progress of geological investigation gradually dissipated the idea, at first universally entertained, that the granite or crystalline

foundations of the earth's crust were of older date than all the fossiliferous strata. It has now been demonstrated that this is so far from the truth, that it is difficult to point to a mass of volcanic or plutonic rock which is more ancient than the oldest known organic remains.

And the same authority, in his address as President of the British Association, at Bath, in 1864, says :—

Various experiments have led to the conclusion that the minerals which enter most largely into the composition of the metamorphic rocks have not been formed by crystallising from a state of confusion, or in the dry way, but that they have been derived from liquid solutions, or in the wet way.

So, in regard to the theory concerning the *earth's central heat.* Mr. Goodwin, in *Essays and Reviews*, pp. 213, 214, maintained, in opposition to the Scripture record of creation, that—

The first clear view which we obtain (by means of science) of the early condition of the earth, presents to us a ball of matter, fluid with intense heat, spinning on its own axis, and revolving round the sun.

And M. Figuier, in *La Terre avant le Déluge*, p. 27, published in Paris, 1863, three years later than *Essays and Reviews*, after eulogising La Place's theory of the earth being 'an extinguished sun, a refrigerated star, a nebula which has passed from a gaseous to solid state,' declares :—

We have established that the *centre of our globe* is still, in our own day, elevated to 195,000°, a temperature which surpasses all the imagination can conceive. We cannot have any difficulty in admitting that, by a heat so excessive, all the materials which now enter into the composition of the globe were reduced, at the first, to a gaseous or vaporous condition.

Whereas, Sir Charles Lyell, in the following year (1864), said, in his address at Bath :—

The exact nature of the chemical changes which hydrothermal action may effect in the earth's interior will *long remain obscure to us*, because the regions where they take place are inaccessible to man; but the manner in which volcanoes have shifted their position throughout a vast series of geological epochs may explain the increase of heat as we descend towards the interior, *without the necessity* of our appealing to an original central heat, or the igneous fluidity of the earth's nucleus.

Connected with the differences amongst geologists, respecting the earth's central heat, the question naturally arose, how many years elapsed before its surface obtained its present *mean temperature*, and on this subject they are

as much at issue with each other as it is possible to be. E.g., Professor W. Thomson declares that the gradual *cooling of the earth's crust* from a state of fusion must have occupied about 98,000,000 of years. M. Boué contends, that as 9,000,000 years are required alone for the earth to lose 14° Réaumur, the period of cooling must be estimated at 350,000,000 of years! And Professor Haughton thinks the cooling must have continued 2,298,000,000 of years. While Mr. Darwin, in great excess of all three, calculates that 306,662,400 years must be allowed for the denudation of the weald alone!

This enormous difference respecting the cooling of the earth's surface may be accounted for by our limited knowledge concerning the depth of the earth's crust, although Sir Charles Lyell considers it is known to a depth of 'perhaps ten miles,' *Elements of Geology*, p. 2: but how he obtains this knowledge is a mystery, for the deepest mine on record is less than half a mile in depth; and it would require more than twenty shafts of such a mine, end to end with each, before the earth's surface could be known to the depth of ten miles.

Again, in respect to *Geological Breaks*; whereas it was once generally assumed that periods of unlimited duration must be reckoned between the different formations, upwards of thirty in number, now we find Mr. Hamilton, President of the Geological Society, in his Anniversary Address (1865), declaring as follows:—

> We are daily becoming more convinced, that *no real natural breaks exist* between the Faunas and the Floras of what we are accustomed to call geological periods. We learn now, that those forms of animal life which roamed over the surface of the earth before man came to exercise dominion over them, were not, as was at one time supposed, destroyed before his arrival, but continued to co-exist with him, until the time came when they were to make way for other forms, more suited to the new conditions of life and to his requirements.

Similarly, we find two opposite theories to account for the *climatic differences* which have existed in former ages on earth; when, for example, the region of the Arctic circle once possessed a tropical temperature, as proved by the existence of coal in *Baffin's Bay*. The general opinion has hitherto been, that there was once a uniform temperature over the whole of the earth's surface, which could only be ascribed to the great predominance of the effects

of the central heat of the earth over those of solar radiation. But now a new theory has been proposed, as we shall see, by which the shifting of the ground would gradually have brought all parts of the earth, in the course of ages, under a tropical clime.

So as regards *Geological fossils*; whereas it was formerly maintained, by Sir Charles Lyell and other distinguished geologists, that a large number of pre-Adamite fossils, found in the Tertiary formation, were precisely the same as species now in existence, the more complete investigations of M. d'Orbigny have shown that this identity of species does not exist, but that, between the termination of the Tertiary period and the commencement of what is called 'the Human period,' to which the Mosaic cosmogony refers, there is a complete break. Although five in every seven *genera* are the same in the Human as in the Tertiary period, there is not a single *species* common to the two periods.

Concerning what is termed *successive creations* amongst fossil remains, it is known that two distinguished geologists, Sir Charles Lyell and Sir Roderick Murchison, are at issue with one another on this subject; and that, whereas M. d'Orbigny estimates the number of distinct formations or successive creations (i.e., before the discovery of the Laurentian beds in Canada) at twenty-nine, Professor Huxley speaks, in his address to the Clergy at Sion College in 1867, of only '*three* successions—*three* revivals,' though it is doubtful whether he admits of any new creations at all,[1] since, in his anniversary address as President of the *Geological Society* in 1862, he contended, 'Those seemingly sudden appearances of new genera and species which we ascribe to new creation, may be the simple results of migration;' and in his 'Lecture to Working Men on a piece of Chalk,' delivered at the Norwich meeting of the British Association in 1868, after offering his audience the choice of two theories, either that of 'successive evolution,' or 'successive creation,' and giving his pre-

[1] At a meeting of the *Victoria Institute*, May 10, 1869, the chairman stated this doctrine had 'been denied by Huxley himself, and it is a point which even Darwin felt he could not stand upon. He feels that the *successive creation* theory is gone. Year after year geology is going in a contrary direction to that theory.'—*Transactions*, iv. 290.

ference to the *former*, he concluded by assuring them that the most important lesson to be deduced from a piece of chalk, was that it had revealed 'always working without haste and without rest, *Natural Causation*.' And in opposition to the theory of a 'succession of creations,' so generally entertained by geologists, Professor Huxley recently stated at the Geological Society, that 'in the lowest rocks, and in the Silurian system, you might find as great a variety, and as high a development, as at the present time, for any evidence there is to the contrary.'

Another theory concerning the *contemporaneity of man and extinct mammalia* has been much contested by modern geologists. When M. Schmerling declared, in his *Recherches sur les Ossemens fossiles des cavernes de Liége*, that the human remains found in those caves, though in a state of less decay than those of the extinct species of beasts—accompanied by rude flint knives and other instruments of flint and bones, were *coeval* with those of the quadrupeds of extinct species found with them, Dr. Buckland stated, in his *Bridgewater Treatise*, i. 598, that, 'after a careful examination of M. Schmerling's collection, *he entirely dissented*' from the above opinion. And the conclusion of an eminent man of science, only five years ago, shows that it is very doubtful whether the extinct animals, such as those modelled in the gardens of the Crystal Palace, are of the great antiquity hitherto assigned to them. Thus Mr. Prestwich, in a paper read at the *Royal Institution*, 'On the Flint Implements found at Amiens,' said:—

> That the evidence, as it then stood, seemed to him as much to necessitate the bringing forward the extinct animals towards our own time, as the carrying back of man to the geological times.

The *Atomic hypothesis* of everything in creation having originated in a fortuitous concourse of atoms, entertained for so long a period by eminent *savans*, has been revived in our time by Mr. Dalton, and pronounced by him to be a 'chemical truth.' So elated was the University of Oxford at this supposed discovery in the realms of Science, that, notwithstanding Mr. Dalton was a professed Quaker, the authorities in 1865 conferred on him the degree of D.C.L. Yet two years had not elapsed, when the President of the British Association

at Dundee told the scientific world there assembled, that the Atomic theory was *an entire mistake.* In the same way, the ultimate constitution of all matter and its finite or infinite disability has been the subject of speculation by the greatest philosophers of all times—finite divisibility, or the Atomic hypothesis, having been adopted by Democritus, Epicurus, and Newton; and infinite divisibility by Plato, Aristotle, Descartes, Leibnitz, and Euler.

Another closely allied hypothesis, that of *Spontaneous Generation*,[1] which was taught in all the schools during the sixteenth century, in which the scientific teaching of the day affirmed that everything sprung from the corruption of organic matter, has been recently revived on the Continent by Messrs. Pennetier and Pouchet, though it is difficult to see how either of these theories can be reconciled with belief in the Supreme Creator of all. Hence Dr. Ord, Lecturer on Physiology at St. Thomas's Hospital, in a discussion at the *Victoria Institute*, April 19, 1869, frankly declared that the more he read on the subject, the more he was convinced that 'spontaneous generation' never occurs at all.

It is not a little curious, that on another scientific speculation, just as Professor Tyndall has been calling public attention, with his usual ability, to what is termed *The Germ Theory of Disease*, Dr. Angus Smith of Manchester, who has probably done more than any other man in the country to secure its general acceptance, has recently stated, in a paper read by him before the Association of Medical Officers of Health, that he was no longer able to believe in that theory. Considering the powerful motives which Dr. Smith had for remaining in the germ-faith, this recantation is calculated to shake public confidence in the value of the interpretation given by Professor Tyndall to his recent experiments on 'Dust and Disease,' and the cogency of the inferences drawn by him therefrom. But the attractive simplicity of the germ

[1] Ever since the author of *The Vestiges of Creation* propounded the theory of 'spontaneous generation' about twenty-five years ago, many *savans* at home and abroad have been striving unceasingly to produce some proof of its truth. But though we often hear that some one has discovered this or that, none of these 'animated molecules' are ever publicly produced; and the more closely this theory is investigated, the farther it is removed from the domain of real science.

theory has a fascination about it which causes certain speculative minds to forget that ingenious experiments are frequently a delusion and a snare, when the reasoning founded on results is not subordinated to the requirements of sound logic.

Again, on the question of the length of time required for the formation of different portions of the earth's surface, how wide is the difference between the *savans* in the present day. Take, for example, *the Growth of Peat.* M. Boucher de Perthes teaches, that it can only be computed at the rate of about one-fifth of an inch in a hundred years; whereas Sir Charles Lyell, in his *Principles of Geology*, shows that a peat-moss in Ross-shire has grown at the rate of *eight feet in fifty-eight years.* The same author mentions also, that the *Roman roads* in Scotland are now in some instances covered over with peat-moss to that thickness; so that, according to the estimate of M. Boucher de Perthes, these *Roman* roads must have been formed nearly 50,000 years ago! So much for the unity and certainty of some scientific theories relating to the time required for nature's operations, even when historic facts are at hand to rectify the mistake.

So, with regard to the rate at which the *alluvial deposits* are formed at the mouths of the great rivers, from which geologists have sought, without much reason, to obtain an estimate for the age of man on earth; the same differences, as we shall see when considering that special branch of our subject in a future chapter, exist amongst the *savans*, as we have just learnt is the case in regard to the growth of peat.

The same must be said with reference to an estimate of man's age from the time required for the recession of the *Falls of Niagara*, which Sir Charles Lyell, when he visited them in 1841, calculated was at the rate of one foot per annum; whereas M. Le Vaux,[1] a Canadian geologist, has proved, from long-continued observations

[1] M. Le Vaux's mode of calculating the difference is effected in the following manner:—He drives three iron pins on Goat Island in a straight line with some point on the edge of the precipice. At his visit next year he is able to calculate how far the precipice has been worn away by observing how far the given point has receded from the line of the iron pins.

made on the spot, that the average rate is fully five feet every year.

It is the same in regard to the *Mountain-Cones of Auvergne*, which have been adduced by Sir Charles Lyell and others to prove their age prior to the Noachian Deluge; whereas it has been shown, that these Mountain-Cones, which are formed by extinct volcanoes, were actually erupted as late as the fifth century of the Christian era. See this subject fully considered in an able article in the *Quarterly Review* of October 1844.

So, with reference to the subject of *Upheavals and Subsidences*, which is often adduced by geologists as affording an estimate of man's age on earth; Sir Charles Lyell was the chief witness to the supposed fact of the coast of Sweden having risen at the rate of so many inches per annum; whereas the *Geological Magazine* of March 1868 contains a distinct confutation of the supposed evidence. Lord Selkirk went over the same ground as Sir Charles Lyell, and made investigations at every place where his predecessor had been, and where he had discovered signs, as he thought, of the land having risen; but the earl found there were no such *proofs* of this imagined rise.

On the subject of the *Noachian Flood*, how various have been the opinions promulgated by certain *savans*, who have differed alike amongst each other and with themselves; propounding a theory one day, and contradicting it the next: some contending that the destruction of the human race was universal, 'eight souls' excepted, and the Deluge local; others that both were universal; and a third party deny that either the race of men or the surface of the globe was swept away by the waters of the Flood; while the most eminent authority of them all, the late Dr. Buckland, arguing once in favour of universality, took up a position from which he subsequently withdrew.[1] His language in the *Reliquiæ Diluvianæ*, p. 25, deserves to be remembered:—

M. Cuvier, in his *Essay on the Theory of the Earth*, expresses his conviction that if there be one fact *thoroughly established by geological investigations*, it is that of the low antiquity of the present state of the

[1] Dr. Buckland's recantation, if it may be so termed, is to be seen in his *Bridgewater Treatise*, vol. i. pp. 94, 95.

surface of the earth, and *the circumstance of its having been overwhelmed at no very distant period by the waters of a transient deluge*; and although Voltaire may have indulged himself in denying the possibility of such an event, and Linnæus have overlooked its evidences, the discoveries of modern geology, founded on the accurate observation of natural phenomena, *prove, to demonstration, that there has been an universal inundation of the earth*, though they have not yet shown by what physical cause it was produced.

Dr. Buckland likewise argues, that the bones of horses and deer, now in the College of Surgeons in London, which were sent in 1822 to Sir E. Home by Captain W. S. Webb, who procured them from the Chinese Tartars of Daba, who assured him that they were found in the north face of the snowy ridge of the Himalaya Mountains, which Captain Webb estimated was 16,000 feet high, and only obtained from the masses which fall with the avalanches from regions of perpetual snow,[1] must have been the remains of the antediluvian world; as he justly observes:—

> The occurrence of these bones at such an enormous elevation in the regions of perpetual snow, and consequently in a spot now unfrequented by such animals as horse and deer, can, I think, be explained only by supposing them to be of antediluvian origin, and that the carcases of the animals were drifted to their present place by the diluvial waters.—*Reliquiæ Diluvianæ*, p. 223.

To which may be added the opinion of that distinguished Oriental scholar, Sir William Jones, as quoted in Murray's *Truth of Revelation*:—

> The narrative of a deluge, which has destroyed the whole race of man, except four pairs, is an *historical fact*, admitted as true by every nation to whose literature we have access.

And in reply to Voltaire's assertion of its being a physical impossibility of 'the world having been overflowed with water,' Sir Charles Lyell, in his *Principles of Geology*, vol. i. p. 75:—

> Yet Voltaire knew that the majority of those who were aware of the abundance of fossil shells in the interior of continents were still persuaded that they were proofs of the universal deluge, and as the readiest way of inculcating scepticism on this act of faith, he would *at one time* assert that they were mere sports; *at another*, admitting true shells were found in the Alps, he pretended that they were an

[1] The natives in that neighbourhood say these bones have fallen from the clouds, and consider them to be the bones of genii!

eastern species, which had *fallen from the hats of pilgrims coming from Syria!*

Notwithstanding this curious specimen of interpreting the Mosaic record of the Noachian Flood, Voltaire, in his *Dissertation sur les Changemens arrivés dans notre Globe*, launches out against the physico-theological writers of his time by declaring:—

> Every one of them destroys and renovates the earth after his own fashion, as Descartes framed it: for philosophers put themselves without ceremony in the place of God, and think to create a universe with a word.

Such are some of the differences between various *savans* on the science of *Geology*—notwithstanding that Bishop Colenso has been endeavouring to impress it upon his Zuluanders as the certain 'revelations' of truth; but which, I am inclined to think with Professor Ramsay, is 'on the eve of a great revolution,' a saying which the progress of discovery during the last few years has confirmed in no slight degree; as Mr. Pattison, in his *Examination* of Sir C. Lyell's work on *The Antiquity of Man*, has so ably shown that geology and palæontology can as yet give no more valid explanation of the phenomena than that—

> 'For upwards of 4,000 years all things were in course of becoming what they now are; and what they so became, they have remained, save surface accumulations and minor changes, for the last 2,000 years and upwards.' And this view, he has proved, is the only safe level to which we have attained, 'either by the steep paths of philosophy or faith.'

ANTHROPOLOGY.

The opinions broached by the scientific world in the present day on the subject of Anthropology, are as divergent and numerous as those relating to Geology.

This is seen in the attempt of two distinguished *savans*, Mr. Charles Darwin and Professor Huxley, to define *Creation*, inasmuch as they have selected different names for their respective theories, though both appear to be of the materialistic order.

Darwin calls his theory *Pangenesis*, which implies that all gemmules in a germ must have been either in the parent of that germ, or in some of the progenitors of that parent, and that all atoms which have come, or will yet

come, from this original form must have been there; while Huxley prefers the term *Protoplasm*, of which I shall have occasion to speak in another chapter, and of which he declares there are two kinds; viz., the protoplasm which the plant elaborates out of the mineral kingdom, and the protoplasm which the animal elaborates out of the protoplasm of the plant.

So, when Darwin first propounded his theory of creation, he taught that all animals were descended at most from four or five progenitors, and that analogy led him to infer that all organic beings which have ever existed, were descended '*from one primordial form, into which life was first breathed by the Creator.*' On the other hand, Dr. Louis Büchner, an eminent German naturalist, in his *Force and Matter*, declares:—

The law of analogies; the formation of prototypes; the necessary dependence upon external circumstances which organic bodies exhibit in their origin and form; the gradual development of higher organic form from lower organisms; the circumstance that the origin of organic beings was not a momentary process, but continued through all geological periods; that each period is characterised by creatures peculiar to it, of which some individuals only are continued in the next period;—all these relations rest upon incontrovertible facts, and *are perfectly irreconcilable with the idea of a personal almighty creative power*, which could not have adopted such a slow and gradual labour, and have rendered itself dependent upon the natural phases of the development of the earth.—Pp. 84, 85.

We shall see, in the course of this present work, that another mode of accounting for the origin of species, as propounded by Mr. Darwin, is defined as *The Transmutation Theory*; yet M. Agassiz, an equally distinguished naturalist, has pronounced as distinctly against it.

The conviction, says Agassiz, which draws me irresistibly is, that the combination of animals on this continent, where the faunæ are so characteristic and so distinct from all others, will give me the means of showing that the *transmutation theory is wholly without foundation* in fact.—*Travels in Brazil*, p. 33.

So, in the attempt to trace back man's origin to the ape —which we shall have to consider at length hereafter— there is a fine struggle going on at this present time between the *Monogonists* and the *Polygenists*. Mr. Darwin supports the former, while Professor Carl Vogt,[1]

[1] Dr. Carl Vogt says, 'This much is certain—that each of the anthropoid apes has its peculiar characteristics by which it approaches

though one of his most ardent disciples, advocates the latter, as he derives mankind *from three kinds of apes*, and denounces as irreconcilable with facts, the Darwinian Monogenist theory. And Mr. Crawford, President of the Ethnological Society, though a strenuous advocate of the Polygenous hypothesis in respect to man being descended from various savage progenitors, rejects the theory of man's monkey pedigree altogether, declaring, in his speech at the meeting of the British Association in Nottingham, 1866, that:—

He could not believe one word of Darwin's theory; which he regretted much, as it was believed in by so many men of eminence. It was a surprising thing to him that men of talent should nail themselves to such a creed. It was said, man was derived from a monkey. But he wished to ask, from what monkey? There were 200 or 300 kinds of monkeys, and the biggest of them all, viz., the gorilla, was the biggest brute. Then there were monkeys with tails, and monkeys without tails, but, curiously enough, those which had no tails, and were *consequently most like men*, were the stupidest of all!

It must not, however, be forgotten, that Mr. Darwin confesses his theory at present receives no support from Geology. For he distinctly admits that 'Geology does not reveal any such finely graduated scale' (that is, as his views seem to require), 'and this, perhaps,' he adds, 'is the most obvious and the *gravest objection to my theory*.'

With regard to the various theories respecting the primeval *origin of man*, although it may be truly said that 'their name is legion,' they may be classified under the four-fold and simple division of fish, flesh, fowl, and the vegetable world. The author of the *Vestiges of Creation* considers that man's brains were originally those of a fish; Lord Monboddo was the first to propound the idea of man being only an improved monkey, whose tail had worn off in consequence of his domestic institutions. Professor Huxley gives the preference to the mundane-egg theory, which necessarily implies a *fowl* origin; while Darwin traces the pedigree of man and beast, and all besides, back to the 'one primordial form,' in other words, to the

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man: the *chimpanzee*, by the cranial and dental structure; the *orang* by its cerebral structure; the *gorilla* by the structure of the extremities. —*Vorlesungen über den Menschen*, p. 463.

primeval fungus as the Mother Eve of the Vegetable world.

If we curiously enquire into the details of the mode by which man is supposed to have attained his present position in the pedigree of creation, we see how conflicting are the ideas entertained by the learned world on this interesting subject. Thus Lamarck, 'an acknowledged authority' on such matters, talks of the *shore-bird* feeding at the muddy edges of the water; and, to avoid sinking in the soft substance, stretches its legs to the very utmost, the result being the existence of a certain species like the long and bare-legged waders. The author of the *Vestiges* speaks of the colonising principle of certain wading birds, which might have advanced into

> Dry grounds and woods, elected to the new life perhaps by some of those varieties of appetency which occur in all tribes; thus exposing themselves to new influences, and ceasing to experience those formerly operating, until by slow degrees, in the course of a vast space of time, the characters of the pheasant tribes were evoked.

Thus Lamarck sends the shore-bird into the mud to get his long legs, and the author of the *Vestiges* plucks him back again to resume his short ones, at the same time converting the spoonbill or the stork of the marsh into the pheasant of the woods!

Concerning man's supposed connection with the monkey tribe, it is not a little remarkable, that whereas man is considered by both Cuvier and Blumenbach[1] to be exclusively *bimanous*, and Apes, Monkeys, and Lemurs to be *quadrumanous*, Professor Huxley pronounces the above-named authorities to be entirely mistaken, from assuming that the extremities of the hind limbs bear a resemblance to the human hands, instead of corresponding anatomically with the human feet. He admits that the hind limb of the gorilla is a prehensile foot, though in no sense a hand, and that the difference between the foot of man and

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[1] Blumenbach mentions a curious anecdote of an ape having got hold of a large book on insects, and after having turned over the leaves with a very studious air, pinched out all the painted beetles and eat them, mistaking the pictures for real insects—a tolerable proof of his wanting sufficient reason to detect between the real and the pretended thing, which the lowest type of his supposed descendant unquestionably possesses.

the gorilla is fundamental, though he rejects the term *quadrumanous*, and regards man as a Primate. See Lyell's *Geological Evidences of the Antiquity of Man*, p. 478.

So, on the *Biped* question, Professor Huxley is distinctly at issue with an eminent German naturalist M. Shaafhauser of Bonn, as the following extract from that author's work *On the Relations between the Anthropoid Apes and Man* will show :—

> Whatever may be the value of a profound knowledge of the mode of life of a gorilla, its anatomical structure shows us sufficiently the degree of his organisation and the size of his brain, upon which depends his intelligence. In this respect the distance between the gorilla and man is immense, a difference which has *not been properly appreciated by Mr. Huxley*. There is no doubt that in the brain of the large anthropoid apes, no essential part of the human brain is absent; but as regards volume, the difference is very remarkable. The assertion of Mr. Huxley, that men, even as regards the volume of the brain, differ among themselves more than apes, is *equally erroneous*; an opinion which is founded upon the arbitrary employment of measurements of crania both rare and doubtful. The brain of the Australian exceeds two or three times the volume of the brain of the gorilla, whilst the brain of a European exceeds that of the Australian by only one-fifth. Another allegation of Mr. Huxley, to the effect that, as regards the volume of the brain, the inferior apes differ from the superior as much as the latter differ from man, is also *without scientific value*, inasmuch as this author has not taken into account the incomparable difference of size of the above-mentioned simia, whilst in this respect man and the gorilla are nearly equal. This distance between man and ape must not be ignored; in fact, one glance at the cranial cavity reveals it all.

How man has attained to his present *intellectual* condition is another subject of dispute amongst the learned in the present day.

The late Archbishop of Dublin, with that mastery of logic for which he was so famous, and in this discussion abstaining from an appeal to anything like Scripture authority, maintained that mere savages, in the lowest degree in which it is possible for man to subsist, never did and never could, unaided, raise themselves into a higher condition; and even when in contact with superior races, experience shows that they never invent or discover anything beyond what is necessary to keep them alive on the barest subsistence. Whatever be the natural powers of the human mind, some instruction from without is

required to prepare even for a start. Archbishop Whately held it to be a complete moral certainty, that men in a state of nature, with the faculties born with them neither unfolded nor exercised by education, never did, and never can, raise themselves from that condition. Therefore, according to our present experience, the first introducer of civilisation must have been in a more improved state. At the commencement of the human race there could be no man to effect this, therefore it must have been the work of another being; and the soundest conclusion is, that a Divine Creator and Instructor must have performed this.

On the other hand, Sir John Lubbock, at the meeting of the British Association in Dundee in 1867, endeavoured to refute the Archbishop's argument, by contending that the primitive condition of man was one of complete barbarism, from which certain races have raised themselves by their own power; and that, instead of existing savages being the degenerated descendants of more advanced ancestors, all the races now civilised arose from those which were in a state of barbarism. Sir J. Lubbock further indicated that the first man, 'worthy to be called a man, was in advance of the condition of some *animal progenitor*;' evidently tending to Lord Monboddo's theory of our monkey-descent, as originally proposed by him in the last century, or the gorilla speculation, which seems to be favoured by Professor Huxley in the present day.

So in reference to the subject concerning *unity of race*; a few years ago it was supposed that there was direct physical evidence that the whole human race could not have sprung from a single pair, and the consideration of which will be discussed in a future chapter. But what do we find is the case now? We see that this is only one of the many instances of *variations in science*—that those speculative theories have disappeared; that they have been supplanted by other theories which are now more popular; and those who still imply that the human race did not spring from a single pair, are forced to admit that there is no scientific objection to the declaration of Scripture, that 'God hath made of one blood all the dwellers upon earth.'

The same disputes exist amongst our *savans* in the present day concerning the *origin of speech*, the *antiquity of man*,[1] and the age of the *flint* implements which have been discovered in various places beneath the soil, whether they were formed by a race gifted with speech or not; but as these subjects must be separately considered hereafter, I abstain from mentioning any of the variations existing amongst the learned about them now.

EGYPTOLOGY.

Although entertaining the highest respect for the great and useful labours of the Egyptologers of the present day, and persuaded that the subject generally affords the best answer to the objections of Bishop Colenso, who confidently declares that—

> All the details of the story of the Exodus, as recorded in the Pentateuch, again and again assent to propositions as monstrous and absurd as the statement in arithmetic would be that two and two make five. There is not the slightest reason to suppose that the first writer of the story in the Pentateuch ever professed to be recording infallible truth, or even actual historical truth.—*The Pentateuch and Book of Joshua critically examined,* pt. ii. p. 370.

—it is impossible to deny that differences on a variety of matters connected with the history of Egypt exist amongst those who ignore or who lightly esteem the authority of Scripture on such questions.

Take, for instance, the supposed age of the great pyra-

[1] Sir Charles Lyell is the chief authority on the one side for a very high antiquity, while he is fairly met by an equally good authority in the geological world, Mr. S. R. Pattison, F.G.S., who adopts the other and Scriptural side of the question. No two propositions can be in stronger contrast than those which may be named, from their advocates, the Lyellian and Pattisonian creeds. The former adopts a chronological scheme which (though handled with great skill, and I may add, with the candour becoming to the subject and the author), as it ignores Scripture authority, is utterly destitute of any proof sufficient to sanction its adoption; while the latter shows that it is 'physically and philosophically possible to intercalate all the epochs of man, shown in the monuments of the globe itself, within the compass of the years assigned to the same occurrences by the received interpretation of Scripture.'

mid of Ghizeh, which has been the subject of such unceasing disputes in all its details from time immemorial. Whether or not it was the burial-place of any of the Pharaohs, and who was the king that had such a magnificent mausoleum for his final resting-place on earth, are likewise much disputed. Herodotus buries old king Cheops of the fourth dynasty, who was reigning in the twenty-second century B.C., in the great pyramid. Lucan places Amasis of the twenty-sixth dynasty there, and adds all the Ptolemies B.C. 300–30 to keep him company; but neither time nor facts embarrass a poet!

So also on the etymology of the word Pyramid. Ammianus Marcellinus of old derived it from the Greek word πῦρ 'fire;' because, as he says, 'the Egyptian pyramid rises to a sharp pointed top, like to the form of a fire or flame.' Dr. Birch, the prince of Egyptologers in the present day, suggests two Coptic words as its probable origin, viz. *pouro* 'king,' and *emahau* 'tomb,' meaning 'the king's tomb.' Professor Piazzi Smyth also selects two Coptic words, but entirely different ones, viz. *pyr* 'division' and *met* 'ten.' The late Mr. John Taylor, who wrote some years ago most suggestively on the great Pyramid in general, thought it must be derived from two Greek words, πυρός 'wheat' and μέτρον 'measure,' considering that the empty coffer found in the 'king's chamber' in the centre of the building was intended as a chaldron-measure of wheat. Mr. Kenrick of York also selects two Greek words for its derivation, viz. πυρός 'wheat' and μέλι 'honey,' as the term 'pyramid' was applied by the Greeks to a cone-shaped cake, used by them at the feasts of Bacchus. Dr. Ewald, the distinguished Hebrew scholar, considers it a Semitic version of an Egyptian word, viz. *pe-ram* 'the lofty' or 'the mountain,' and the original of the word *charabeth* 'the desolate places' or burial-places of kings, as used in Job iii. 14.

So, with regard to the time of its erection, the differences are no less considerable. Le Sueur determines its date to be certainly as old as B.C. 4975; Brugsch, B.C. 3657; Lepsius, B.C. 3426; Poole, B.C. 2352; Piazzi Smyth, B.C. 2170; Sir G. C. Lewis, B.C. 903.

Thus there is a variation of over 4,000 years between these learned authorities respecting the age of the oldest monument and the earliest proof of man's existence upon earth.

As a further sign of the great uncertainty regarding the whole subject of the pyramids generally (the remains of sixty-six have been discovered in the valley of the Nile), it was once maintained that they were a *product of nature*, until Alexander von Humboldt, in the last century, wrote a treatise to prove that they were built by man.

Concerning the duration of the *Shepherd dynasty*, the conqueror of which is described in Scripture as 'the king which knew not Joseph,' Bunsen computes it at 926 years; Lepsius reduces that estimate to 500 years; while De Rougé elongates it to 2,017 years. The discovery by Herr Dümichen of the new tablet of Abydos, which contains a list of the Pharaohs from the beginning of the kingdom of Egypt until Pharaoh Seti I., B.C. 2350–1400, appears to decide the question, and confirms the testimony of Eusebius, who, in his *Chronicon*, places it at 106 years,[1] which alone harmonises with Scripture history respecting the Israelites in Egypt.

The duration of their sojourn in that land of bondage has also been the subject of extraordinary differences amongst those who profess to be guided by the same principles of interpretation while ignoring all reference to Scripture authority in the matter. Thus, while we read in *Exodus* xii. 40, 41, that the whole period from the time of Abraham's call until the Exode (compare the LXX. version with *Galatians* iii. 16, 17) was exactly 430 years, Lepsius confines the period to 180 years; Brugsch makes it over 600 years; and Bunsen, in one place, writes that 'the duration of the sojourn in Egypt was 1434 years,' and in another, limits the same period to years 862![2]

[1] The recent discovery by Mariette Bey of a *stèle* of the reign of Ramessu the Great, son of Pharaoh Seti I., in which mention is made of the 400th year of the era of Noubti, bears also upon this subject, and tends to confirm the accuracy of Eusebius for the duration of the Shepherd dynasty.

[2] See Lepsius' *Letters from Egypt*, p. 475; *Histoire d'Égypte*, par Henri Brugsch, p. 80; Bunsen's *Egypt's Place in Universal History*, iii. 357; v. 77.

Until German scholars present the world with results somewhat more harmonious, we need not be much disquieted at Bunsen's ridicule, when he speaks of what 'einige weise Männer und Knaben Englands schlau andeuten.'

The late Baron Bunsen, that 'large-minded, God-fearing old German,' as he has been justly termed, who has written so extensively on the subject of Egypt, is a remarkable instance of fondness for 'scientific' speculation in general, and specially so with regard to the Israelites, together with a quiet ignoring of all Scripture authority when it conflicted with his previously formed ideas. He was not a hieroglyphic scholar himself, but he made use of the monuments of Egypt in order to build the most extraordinary hypotheses therefrom. Thus, to mention one instance of many, Scripture states positively that Joseph was 110 years old at his death. (*Genesis* l. 26.) Bunsen, thinking it impossible for man to attain the age of 100 in this life, considers the figures erroneous, and that Joseph's real age was only 78. Shortly after making this venturesome contradiction of Scripture, Mr. Goodwin called attention to certain monumental evidence in Egypt, which will be more fully considered in a future chapter, by which it will be seen that Bunsen was clearly wrong, and the TRUTH OF THE BIBLE amply confirmed.

The same train of reason appears to have governed Bunsen when he concluded from pottery having been found at a certain depth in the mud of 'the river of Egypt,' that he had obtained evidence of man's antiquity far greater than the Bible allows; yet, when the said pottery came to be carefully investigated, his theory was overthrown in a moment by the discovery of the Grecian honeysuckle, which proved that it could not be of an earlier date than the time of Alexander the Great.

So, when the signs of the zodiac were first discovered on the ceiling of the Hall at Dendera, in Upper Egypt, it was regarded and at once accepted by men of science, as proof that Astronomy had attained a very high standard in that country from the so-called 'Solsticial Period,' or 13,000 B.C., until Champollion's detection of the names of

several Roman Emperors intermingled with the zodiacal signs proved that the painting belonged to a period *subsequent to the Christian era!*

On the subject of Egyptian Chronology there is almost as much difference between Bunsen and Mariette Bey now, as there was between Manetho and Eratosthenes in ancient times. The difference between these two 'acknowledged' authorities[1] may be thus expressed. Manetho gives a list of 488 Egyptian Pharaohs from the time of the proto-monarch, whose reign he commences in a year equivalent to B.C. 5763. Eratosthenes gives for the same period thirty-eight kings, beginning *circa* B.C. 2300. Bunsen is so enamoured of everything connected with the name of Manetho; so much higher than Moses and the writers of Scripture does he rank him in all things, that he is constrained to express himself in the following eulogistic strains:—

Scutcheons were trac'd upon stones, whose records thyself hadst consulted;
Each echoed back the response—Manetho, give us our name!
Grateful, I offer to thee whatever through thee I have learned:
Truth have I sought at thy hand; truth have I found by thy aid!
Egypt's Place in Universal History, ii. 392.

THEOLOGY.

As this can scarcely be classified under the head of Science, it is not possible to say much on the subject now. And my only object in bringing it forward at all is to notice very briefly some of the differences which certainly

[1] It is a singular fact, that two chronologers of the present time, whose reverence for Scripture authority is unquestioned, the Rev. Franke Parker and Mr. Bosanquet, are at issue respecting so well-known a period as the middle of the first Millenary B.C. The former would elongate the commonly received chronology twenty years, the latter would fain curtail it by just the same period; while the world at large will continue to be satisfied with the old paths, which have hitherto seemed to harmonise with the teaching of the Bible, upon the principle that the *via media* or the *juste milieu* is generally the wisest and safest, as well as most likely to be in accordance with the truth.

do exist amongst those who are supposed to belong to the same school in their mode of interpreting what Christians necessarily regard with unswerving faith as the TRUTH OF THE BIBLE.

I do not now refer to those who may be considered as extreme men, like certain Rationalists at *Gröningen*, in Holland, who term the Christian's recognition of Scripture infallibility as 'Bibliolatry,' and the inspiration of the New Testament as 'Apostle deification!'

Or to a notorious Socinian author, who once daringly avowed that—

> If anyone could succeed in proving the doctrine of the atonement from Scripture, then would he rather reject the Scriptures altogether than believe such a doctrine.

Or to the ablest organ of the Rationalistic school in this country, which announces its creed in the following frank way:—

> In the matter of doctrine, three articles of faith have, more than any other, prevented the cordial and grateful reception of ecclesiastical Christianity by the most pure and honest minds; viz., *Vicarious Punishment, Salvation by Faith,* and *Eternal Damnation.* Of these doctrines, as now promulgated and maintained, three things may, in our judgment, be confidently asserted,—that they were undreamed of by Christ; that they can never be otherwise than *revolting* and inadmissible to all whose intuitive moral sense has not been warped by a regular course of ecclesiastical sophistry; and that no Christian or sensible divine would teach them, were it not held that every text of Scripture is authentic, authoritative, indisputably true, and in some sense or other, inspired and divine.—*Westminster Review,* vol. xlvi. pp. 510, 511. April, 1863.

It is not to these extreme Rationalists, as they may be fairly termed, that I am now alluding; but to men of such moderation in their theological teaching as the authors of *Essays and Reviews.* Yet on the first, and perhaps the most important subject of discussion, on what may be regarded as the most scientific portion of the Bible,[1] viz., *the Mosaic Cosmogony*, we find two of the Essayists distinctly at issue with each other. For thus we see, that whereas the late Professor Baden Powell declared that

[1] In the next chapter will be seen some of the many differences between those who claim to be scientific teachers of Biblical exegesis, but who are greatly at issue with each other on various subjects where unanimity might be expected and desired.

'Moses was *inspired*' to write the first Chapter of Genesis, which, though 'not intended for an historical narrative, contains 'the most sublime and unrivalled imagery, the language of figure and *mythic poetry*,' his brother Essayist, Mr. Goodwin, proclaims an entirely opposite view, saying:—

> Remarkable as this narrative is for its simplicity and grandeur, it has *nothing* in it which can be properly called *poetical*. It bears on its face no trace of *mystical* or symbolical meaning. Things are called by their right names, with a certain scientific exactness widely different from the imaginative Cosmogonies of the Greeks.

So, on the subject of 'myths' generally, how remarkable it is, that while Bishop Colenso and writers of his school appear to regard Christ as a real person, the founder of the only true religion revealed to the world, and Moses as a myth, the invention of a much later age than that in which he is supposed to have lived; on the other hand, the sceptical school of the last century seem to have acquiesced in the personality of Moses while they denied the reality of the Author of the Christian religion. At least, such appears to be the teaching of some amongst them, e.g., M. Dupuis, in his *Origine des Cultes*, pronounces Christianity to be 'a mythological fable.' And Volney affirmed that—

> The existence of Jesus Christ was no better proved than that of Osiris and Hercules, or that of Fo or Buddha, with whom the Chinese continually confound him.

Again, on the subject of *miracles*, the general tone of the rationalistic school appears to be the rejection of the miraculous, according to the dogma of *Hume*, that as—

> A miracle is a violation of the laws of nature, and a firm and unalterable experience has established these laws; the proof against a miracle, from the very nature of the fact, is as entire as any argument from experience can possibly be imagined!

And in the same way, Strauss asserts that a miracle is an impossibility, because the 'chain of endless causation can never be broken.' And in the Introduction to his *Life of Jesus*, Strauss declares:—

> We may summarily reject *all miracles*, as simply *impossible* and irreconcilable with the known and universal laws which govern the course of events.

Yet Renan, a leader of the same school in the present day, says in his *Vie de Jésus* :—

We do *not* affirm that miracles are *impossible*, we only affirm that none have been proved.

Observe, also, what a marked distinction there is in the Christian ethics of two such noted teachers as Mr. John Stuart Mill, and the author of *Ecce Homo*, who would be considered by most persons as belonging to the same school of religious thought. In speaking of the morality inculcated by the New Testament, Mr. Mill, in his Essay *On Liberty*, says :—

Christian morality, so called, has all the character of a reaction; it is, in great part, a protest against Paganism. Its ideal is negative rather than positive; passive rather than active; innocence rather than nobleness; abstinence from evil, rather than energetic pursuit of good; in its precepts (as has been well said) '*thou shalt not*' *predominates over* '*thou shalt.*'—P. 29.

Now let us hear the author of *Ecce Homo*, on the other hand, saying :—

Christ raised the feeling of humanity, from being a feeble *restraining* power, to be an *inspiring passion.* The Christian moral reformation may be summed up in this—humanity changed from a restraint to a *motive.* We shall be prepared, therefore, to find, that while earlier moralities had dealt chiefly in *prohibitions*, Christianity deals in *positive commands.* And precisely this is the case, precisely this difference made the Old Testament seem antiquated to the first Christians. They had passed from a region of *passive* into a region of *active* morality. The old legal formula began '*thou shalt not,*' *the new begins* '*thou shalt.*'—Pp. 174 et seq.

It is scarcely possible for any two authors to contradict each other in more express terms; and the only solution of this palpable difference between two prominent writers of the same school is by supposing that Mr. Mill had either never read, or had forgotten, if read, the morality inculcated in the New Testament, when he wrote his Essay *On Liberty.*

I have now endeavoured to invite attention to some of the VARIATIONS IN SCIENCE under the respective heads of Astronomy, Geology, Anthropology, Egyptology, and Theology, which are known to exist amongst the learned of the present day, and which seem sufficient to prove the truth of the saying, that the science of one age is the nonsense of the next, on account of its endless changes;

or, to reverse the order, the laughing-stock of to-day is the pedestal of to-morrow. They afford, moreover, a suitable reply to the astonishing remark of a writer in the *Westminster Review*, that—

> Wherever the statements of the Bible and the conclusions of Science have come into collision, the verdict of Science has *always* stood its ground and the Biblical statements have *always* given way. —*Westminster Review*, October 1865, p. 509.

Far truer and more philosophical was the conclusion of Bishop Butler, that—

> If in Revelation there be found any passages, the seeming meaning of which is contrary to natural religion, we may most certainly conclude such seeming meaning cannot be the real one. But it is not any degree of presumption against an interpretation of Scripture, that such interpretation contains a doctrine which the light of nature cannot discover, or a precept which the law of nature does not oblige to.—*The Analogy of Religion*, pt. ii. ch. 1.

When, therefore, Scripture and Science appear to differ, instead of admitting 'the irreconcilable differences' between them, as some amongst us are too fond of doing, notwithstanding the endless disputes in their mode of explaining Science as we have already seen, which will remind the student of the description of *The Theogonies* by the Stoic of Damascus[1] in the olden times, it is surely the part of a wise and humble Christian to conclude that he has not really understood what the Bible was meant to teach; and that it behoves him to wait patiently for more light, until—if it so please the Author of Revelation and the sole source of all Good—that distant time when we shall 'know even as we are known.'

Never, probably, was the truth of that fine saying—*A little philosophy inclineth man's mind to Atheism, but depth in philosophy bringeth it about to religion*—more

[1] 'In the *rhapsodies*,' says Damascius, 'which pass under the name of *Orphic*, the theology, if any, is that concerning the *Intelligible*, which the philosophers thus interpret. They place *Time* for the one principle of all things, and for the other two *Ether* and *Chaos*: and they regard the egg as representing *Being* simply, and this they look upon as the first triad. But in order to complete the second triad they imagine as the god a *conceiving egg*, or a *white garment*, or a *cloud*, because Phanes springs forth from these. But concerning the middle subsistence *different philosophers have different opinions*,' as indeed is generally the case with most scientific speculators, especially those who reject the authority of Scripture in the present day.

clearly manifested than in comparing the proper 'free handling' of Scripture by such men as Bacon, or Newton, or Locke, or Butler, with that by some of our *savans*, who appear to ignore its claims altogether as authoritative, in the present day. But as one has remarked:—

> Descartes has perished, Leibnitz is fading away, while Bacon and Locke and Newton remain, as the Danube and the Alps remain; the learned examine them, and the ignorant, who forget lesser streams and humbler hills, remember them as the glories and prominences of the world. God has shown His power in the stars of the firmament, in the aged hills, and in the perpetual streams; but He has shown it as much in the minds of the greatest of human beings. Milton and Locke, and Bacon and Newton, are as great as the hills and the streams, and will endure till heaven and earth shall pass away, and the whole fabric of nature is shaken into dissolution and eternal ashes.—*Elementary Sketches of Moral Philosophy*, by Sydney Smith, p. 130.

It has been well observed respecting Butler and Bacon, that the former is in *Theology* what the latter is in *Science*. The reigning principle of the latter is, that it is not for man to theorise on the *works of God*, and of the former, that it is not for man to theorise on the *ways of God*. Both deferred alike to the certainty of experience, in striking contrast to much of the Science of the present day, as being paramount to all theory, however attractive; and whosoever closely studies the writings of these great men will find a perfect harmony between a sound philosophy and a sound faith.

We may then rest satisfied with this creed. He who hath called this world into existence by the breath of His mouth, hath revealed to us our knowledge of the same, in the simple and dignified language of the Bible. It is impossible that anything can be found in the volume of His works, which is opposed to what is written in the volume of His word.[1] And the best way of showing the fearlessness of our faith in the Divine Origin of Scripture, is by leaving Science perfect liberty to work out her own conclusions, in the full assurance that true philosophy can never contradict the Oracles of the living God. When the professedly-wise of this world seek to distort the facts

[1] There are two books, said Sir T. Browne, from which I collect my divinity; besides that written one of God, another of His servant *Nature*—that universal and public manuscript, that lies expansed unto the eyes of all.

which Science reveals, in conformity with what they conceive to be the meaning of Scripture, they expose themselves to the censure of Bacon, 'being guilty of the impiety of thinking that they honour the author of truth, by offering to Him the unclean sacrifice of a lie.'

Hence, when we find ministers of religion, like Bishop Colenso, declaring that—

> Multitudes have already broken loose from the restraints of that traditional religious teaching which they know to be contradicted by some of the most familiar results of modern science——

and affirming with surprising confidence, that—

> The Bible and Science are opposed to each other [1]—

we can only lament the progress which infidelity is making amongst those who ought, by their profession, to be defenders rather than assailants of the integrity and infallibility of the Bible. Happy would it be for such, if they would only seek to profit by the lesson which that great master theologian St. Augustine gives, when humbly confessing his own unfitness for such a responsible post:—

> 'When I was young,' he says in one of his sermons, 'I came to the study of the Bible with shrewdness of disputing, and not with meekness of enquiry; and thus, by my own perverseness, I fastened the door of Scripture against myself. And why? Because I sought with pride what only can be found with humility.'

How truly Bengel foresaw the result of Biblical criticism, as so zealously but partially practised in the present day, when he predicted, at the commencement of the last century, with far-seeing wisdom:—

> Literature will become a new and different thing. The doctrine of the inner word will do immense mischief, if once the philosophers begin to make use of it. They will want to have the kernel without the core, husk, or shell, i.e., Christ without the Bible, and so, from what is most subtile, advance to what is grossest without knowing what they are doing.—Burke's *Life of Bengel*, p. 295.

In applying the term 'Infidelity' to those eminent men of science who prefer their own speculations to the authoritative TRUTH OF THE BIBLE, I disclaim all intention of using it in an offensive sense. It is employed simply as descriptive of those who ignore the claims of the written

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[1] *Pentateuch Critically Examined*, by Bishop Colenso, pt. iii. preface, pp. 18, 40.

Word, and who reject its inspiration, in the plain and common meaning of the term. It may, however, be well to remember the distinction between this phase of infidelity, and the bolder Atheism which was rampant in France at the time of the great Revolution, though the latter appears to be the natural conclusion of the former. For he who once quits the only safe anchorage on the rock of Scripture, may drift with unconscious speed through the shoals of infidelity into the whirlpool of Atheism.

None are so blind, proverbially, as those who refuse to see. And the founders of that school which endeavoured to supplant the God of the Bible by the goddess of reason, are striking examples of its truth. How conspicuously they failed in their endeavours to crush Christianity, the history of the French Revolution has clearly shown. Its votaries, however, knowing the value of never acknowledging themselves defeated, have taken a different course in the present age from what they did in the past. The rejection of the Christian faith, which eighty years ago assumed the broad features of undisguised Atheism, but which speedily destroyed itself in an accumulation of difficulties, social, moral and political, has now robed itself in more decent garments, and exhibits to the world the old deceit delineated in more comely lines. The rationalistic school, however, has scarcely left a stone unturned to lessen the value of the only safeguard for every civilised nation, from those deplorable woes which fell first on France, and subsequently on the greatest part of Christendom; and which, as the Bishop of Exeter shows, in his Essay on the *Education of the World*, is the only safe stand-point on which she can rest.

The disciples of the rationalistic school in the present day avoid shocking men's common sense, by promulgating the blasphemous creed of Voltaire and Tom Paine. Nor do they, when looking abroad upon 'the Heavens, the work of Thy fingers, and the moon and stars which Thou hast ordained,' venture to say, *these all made themselves*. They are willing to admit as much as Plato, unaided from on high, discovered and asserted in opposition to the Eleatic philosophy—that they are the work of an intelligent Architect —that some Divine Being may have put all these things in motion; but having admitted so much, they are resolved to

go no farther. Yet who, that has read with an unprejudiced mind Plato's description of creation, as it appears in the *Timæus*, chaps. xii.–xviii., and compares it with the marvellous simplicity and scientific accuracy [1] of the Bible-cosmogony, will not feel constrained to confess that Moses must have spoken as he was 'moved' by the Spirit of God?

Those who ignore the authority of Scripture respecting the Mosaic cosmogony, appear to be but imitators of the Greek philosophers, who were without the responsibility of a revelation from God. Thus, in reference to creation, Thales believed the primary element to be *water*; Diogenes thought it *air*; Anaximander *chaos*; and Heraclitus *fire*. Anaxagoras was perhaps the first to recognise a Supreme Intelligence. Xenophanes maintained the universe to be God, a notion which elicited from Parmenides the dogma, that as existence is conceivable and non-existence inconceivable, therefore *creation was impossible*! With such conflicting opinions, which resemble the variations in Science amongst our *savans* of the present day, Plato at once boldly impugned the philosophy of the Eleatics, that the world was an eternal essence, maintaining, with irresistible logic, that as it was sensitive, it must have been produced, and was in fact the necessary result of an efficient cause, the work of an intelligent architect; in a word, of the One only true God.

In the early stages of Rationalism, the philosophy of some of its advocates, such as Descartes and Leibnitz, was employed on the side of revealed religion, as we find the former writing to M. Chanut in 1646 as follows:—

> I will tell you in confidence, that the notion, such as it is, which I have endeavoured to acquire in physical philosophy is this—that instead of finding means to preserve life, I have found another good, more easy and more sure, which is—*not to fear death.*

It sought to prove the reasonableness of Christianity. It then applied human reason to demonstrate that the supernatural truths of Christianity might be proved by mathematical reasoning. Applying itself thus to the interpretation of Scripture, and aided by philology, criticism, and history, it soon reversed its mode of reasoning, and

[1] This will be fully considered in the following chapter.

proclaimed itself sent into the world to shed new light on the Bible. It scrutinised the miracles recorded in Holy Writ. It would tolerate nothing supernatural. It wearied itself with subtle ingenuity to explain away all that is marvellous in Scripture, and to reduce miracles to the low level of physical phenomena. Hence we see Schleiermacher, a distinguished leader of this school, writing in his Essay *Ueber seine Glaubenslehre an Dr. Lücke*:—

> I will not speak of the six days' work; but the very idea of creation as it is usually construed—how long will it be able to maintain itself against the power of a cultivated view of the world, resulting from scientific combinations which none can escape? How long will the New Testament miracles maintain their place against far weightier objections than those advanced by the French Encyclopedists? The old idea of a miracle must be given up.

Yet this is the teacher whom Quinet declares to have made greater concessions to reconcile the ancient faith of Christendom with modern science than any person living, and speaks of his concessions in that direction as *incredible*! 'Comme un homme battu par un violent orage, il a sacrifié les mâts à la violence pour sauver le corps du vaisseau.'—*Revue des Deux Mondes*, A.D. 1838, p. 473.

Kant, like Schleiermacher, equally sought to decry miracles, arguing that Christ's healing the sick was by medical skill; raising the dead meant premature interment; feeding 5,000 people with a few barley loaves and fishes, the rich sharing with the poor; stilling the tempest, steering round a point which cut off the wind; our Lord's death on the cross, a mere swoon, restored by the warmth of the sepulchre and the effects of the spices, and so forth. Kant's great principle, like that of his English disciples at the present time, was to subordinate Revelation to Reason. He would not build moral duty and virtue on the basis of Christian faith, but he set up a system independent of the Gospel and paramount to it. The essential truths of the Gospel were to be dissolved into ideas. Man was to be able to purify and perfect himself by his own works without aid from the death and merits of Christ. The historical facts and supernatural doctrines of Christianity were to be mere figurative shadows, a sort of hieroglyphic symbol of universal religious truth residing in the reason of man.

This system, however, was deemed unsatisfactory by many. 'In this Christianity of Reason,' wrote one, 'I see neither reason nor Christianity.' 'Under the pretext of making us rational Christians,' said another, 'it makes us irrational philosophers.' This phase of Rationalism being thus condemned as more irrational than any of the supernatural phenomena of Christianity which it sought to solve, an attempt was made to supplant it with another form of philosophical speculation, which also claimed to give a new direction to the interpretation of the Bible. The leaders of this school were Schelling and Hegel. The former asserted the identity of God and nature; the latter regarded God as the absolute idea, ever developing itself in the world, and manifesting itself to the human mind. This philosophy was a revival of that which identified the creature with the Creator. It was, in fact, Pantheism under a more Spiritual form. According to this theory, God is Nature, and Nature is God: God is the Universe, and the Universe is God.

It would seem, however, that this neo-philosophy, as in so many other instances which we shall have occasion to notice in this work, is but a mere plagiarism of the ancient religion of the Hindoos, as the following case will show:—

I was once arguing, writes an English missionary, though of German birth, with a number of Hindoos; when they could proceed no further, they said, 'Come to our holy father; he is one of the wisest and holiest of men, he will soon silence you.' Coming to the man, I found he was a Fakeer, a worshipper of Shiva. I asked him, 'Whom do you worship?' he replied, 'God.' 'And who is God?' I said. He arose from his seat, laid his left hand upon his breast, pointed with his right hand to heaven, and lifting up his eyes, said, 'I worship God the eternal, the infinite, the omnipotent, omniscient, and omnipresent, the holy, just, and righteous, the creator of heaven and earth, the supreme ruler of all things; He it is whom I worship.' I rejoiced at this sublime declaration, and wished to hear these beautiful words once more. I repeated my question; and who is that adorable Being whom you worship? The Fakeer pointed to himself, and replied, '*I am He, He that speaks in me; I am that Being, I am a part of Him; I am He.*'—*Recollections of an Indian Missionary*, by the Rev. C. B. Leüpolt, p. 25.

Compare this definition of Hindoo theology with the theory advanced by a noted American rationalist, whose writings hold a high place in the literature of his country:—

'The Christian teacher,' said Emerson, 'saw that God incarnates Himself in man, and evermore goes forth anew to take possession of the world. He said in this jubilee of sublime emotion, '*I am divine; through me God acts, through me speaks. Would you see God, see me; or see thee, when thou also thinkest as I now think.*'—Emerson's *Essays*, p. 511.

Such Pantheism, whether proceeding from a Hindoo Fakeer, or an American rationalist, was not uncommon in the early ages of Christianity. Hence we find Athenagoras, one of the apologists of the second century, declaring, in opposition to such a creed, that he adored the Being who harmonised the strains and led the melody, and not the instrument which he plays. 'What umpire,' he asks, 'at the games, omitting to crown the minstrel, places the garland upon his lyre?'—*Legatio pro Christianis*, § cxvi.

If, however, Germany has been productive of so much mischief in perverting men's minds by a mixture of Neologianism and Pantheism as the only religion worthy of being accepted by the cultivated intellect of the present day, the same country has happily produced eminent Biblical scholars, such as Niebuhr, Neander, Tholuck, Hegstenberg, Hävernick, Guericke, Olshausen, Kahnis, Kurtz, and others, who have done much to repair the ravages made by the rationalistic school in modern times.

It was forcibly remarked by the first of these, not many years ago :—

Christianity after the fashion of the modern philosophers and pantheists, without a personal God, without immortality, without human individuality, *without historical faith*, is no Christianity for me: though it may be a very intellectual, very ingenious philosophy. I have often said, I do not know what to do with a metaphysical God, and that I will have *none but the God of the Bible*, who is heart to heart with us.—*Niebuhr's Life and Letters*, vol. ii. p. 123.

What a contrast between the teaching of this illustrious layman respecting the need of 'historical faith' to confirm the truth of Christianity, compared with the dogmas of Bishop Colenso[1] on the history of God's chosen people as narrated in the Bible :—

'All the details,' he says, 'of the story of the Exodus, as recorded in the Pentateuch, again and again assent to propositions as monstrous

[1] As an instance of the effect of Bishop Colenso's writings upon the intellectual mind of a Hindoo, I can state this fact upon the undoubted authority of a near relative, who was personally concerned

and absurd as the statement in arithmetic would be, that two and two make five. There is not the slightest reason to suppose that the first writer of the story in the Pentateuch ever professed to be recording infallible truth, or *even actual historical truth.*'—Bishop Colenso's *Pentateuch and Book of Joshua Critically Examined,* pt. ii. pp. 370, 375.

What a fearful comment upon the words of Him, who spake never as man spake on earth, but who, according to the Bishop, knew no more about 'the age and authorship of the Pentateuch than any other contemporary Jew;' for did not Christ say, 'If they hear not Moses and the Prophets, neither will they be persuaded though one rose from the dead'? The Bishop's ideas of Christian ethics may be estimated from his own words, as they afford a melancholy sign of the laxity of faith as interpreted by the age in general, and by this leader of the sceptical school in particular:—

> At the time we were admitted into the ministry of the national church, we heartily believed what we then professed to believe, and we gave our assent and consent to every part of her liturgy. *But we did not bind ourselves to believe thus always to the end of our lives!* —*Ibid.* pt. ii. p. 23.

Kahnis records another melancholy instance of the evil of attempting to play the part of a Biblical critic, when the mind is 'unstable,' disqualified, and untaught by the Spirit of God. This youth, though only 19 years of age, had attained a foremost place among German sceptics, and when sinking into the grave, gave utterance to these solemn words as the creed which he vainly supposed would support him in his passage to eternity—'*I stand righteous before God, having willed to do what is right.*'

Striking is the difference between this rationalistic philosophy compared with the last words of an experienced Christian, whose life had been a silent sermon, which all men might have read, on a similar occasion:—

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in the case. A few years ago, the Rajah *Rundeer Sing* of Ruporthula in the Punjaub, became, through the instrumentality of the Christian missionaries located in his territories, an enlightened man on the truths of the Gospel, and 'an almost Christian.' His baptism was delayed at his own request, solely on account of his mother. On the occasion of her death, when urged to receive baptism, he declined, upon the plea that he had lately been reading the works of Bishop Colenso, that he was convinced by them of the falseness of Christianity, and frankly avowed himself in consequence an atheist!

'Though,' exclaimed the pious *Hooker*, as life was ebbing fast, 'I have by His grace loved Him in my youth, and feared Him in mine age, and laboured to have a conscience void of offence to Him and to all men; yet if Thou, O Lord, be extreme to mark what I have done amiss, who can abide it? And, therefore, where I have failed, Lord, show mercy to me; for I plead not my righteousness, but the forgiveness of my unrighteousness for His merits, who died to purchase a pardon for penitent sinners.'

Another phase of the infidelity which appears to attract so many in the present day is seen in the tortuous way in which truth is treated by those who claim to be, *par excellence*, the Biblical critics of the age, and the only instructors worth heeding; while they either ignore or reject the testimony of that sinless Being who is revealed in the oracles of God as 'The Way, the Truth, and the Life.'

What the heathen Plutarch so happily said respecting Truth—

Than which no greater blessing can man receive or God bestow—

has received a significant illustration of the mode of inculcating it, *metaphysically*, as we must suppose, by the rationalistic school in the present day. Dr. Child, of America, has the confidence to reason on the subject in the following remarkable way:—

A lie is true to the cause that produced it; so that what we call a lie is truth that exists in nature, just as real as what we call a truth. *A lie is a truth intrinsically*; it holds a lawful place in creation, it is a necessity.

As an instance of the truth of the old proverb, that 'extremes meet,' we can adduce the testimony of one of an entirely opposite school from that of the American rationalistic teacher, in the person of the celebrated Dr. John Henry Newman, who, with similar logic, thus reasons on the subject before us:—

It is not more than an hyperbole to say that *in certain cases a lie is the nearest approach to truth.* Newman's[1] *Apologia*, p. 64.

[1] Dr. Newman's reasoning appears to be founded upon the Spanish proverb—'Tell a lie, and find a truth;' though it appears to us weak mortals to present something of a contrast to the apostolic injunction: 'Wherefore, putting away lying, speak every man truth with his neighbour, for we are members one of another.' And so the great Italian poet:—

E che 'l vero condito in molli versi
I più schivi allettando ha persuaso.
Tasso, *La Gerusalemme Liberata*, i. 3.

Or if Dr. Newman's definition be not considered sufficiently explicit, regard the more positive doctrine of the founder of the Jesuits, as expounded by the late Cardinal Wiseman:—

> That we may in all things attain to the truth, taught the great Ignatius Loyola, that we may not err in anything, we ought to hold it as a *fixed principle, that what I see white, I believe to be black*, if the hierarchical church so define it to be.—*Exercises of St. Ignatius Loyola*, edited by Cardinal Wiseman.

Human nature being the same in all countries and all ages, we are not surprised to find the heathen mind as incapable of distinguishing between truth and falsehood, as appears, from their words, to be the case with American rationalists, or distinguished members of the Church of Rome, or learned heathen, in the present day. For thus the Abbé Huc, in his *Travels in China*, relates an interesting conversation between himself and a literary Manderin, one *Ki-chan*, concerning the difference between ministers of state in Europe and China, on this wise:—

> Your mandarins, said *Ki-chan*, are more fortunate than ours. Our emperor cannot know everything, yet he is judge of everything, and no one dares to find fault with any of his actions. Our emperor says, 'That is white;' and we prostrate ourselves and say, '*Yes, it is white.*' He shows us the same object afterwards, and says, 'That is black;' and we prostrate ourselves again and say, '*Yes, it is black!*'

This false mode of reasoning, this perversion of logic, is however so palpable as to carry its own refutation along with it. The mind which could conceive such an abuse of terms must have been previously so blunted by its unsanctified intellect as to have become incapable of perceiving its own want of power to distinguish between good and evil, between right and wrong. And very striking is the contrast which such ethics present to the beautiful apothegm of Bacon respecting the condition and status of every well-regulated mind, in its passage through life. 'For certainly,' he says, 'it is heaven upon earth to have a man's mind move in Charity, rest in Providence, and turn upon the poles of Truth.'

From a review of what has been already considered, we may fairly contend that the stability of the Bible, together with its undeviating uniformity,—notwithstanding the many attempts of hostile critics, like Celsus and Porphyry

in one age, or Hobbes and Astruc, Voltaire and Spinoza, Hume and Paine in another, or Mr. Goodwin and Bishop Colenso in a third, to oppose it, to outflank it, to override it, to blacken it, and to distort it,—contrasts most favourably with the endless variations which are seen in the writings of those *savans* who either ignore or reject the supremacy of Scripture on every subject contained therein. But we may rest confident, that all this hostility has been, and will always continue to be, overruled for good; and that the Revelation, which God has thus given to man, will rise from the ashes of these controversial fires more purified, if possible, than it was before. Like the aromatic, which, the more it is bruised, the richer the scent it gives forth, as one of our own poets sings—

> ———like the plants that throw
> Their fragrance from the wounded part,
> Breathes sweetness out of woe——

even so will it ever be with the unchangeable, infallible, all-perfect ORACLES OF GOD.

THE MOSAIC COSMOGONY.

CHAPTER II.

All the nations of antiquity had their traditions respecting certain pre-historic events, which resulted in adorning their respective countries and remote ancestors with gods, demigods, and heroes famous for their acts and deeds. The word *myth*, which originally meant any tale of interest, came to be applied to these national stories, as Pindar says: 'And wisdom with her *mythi* gently beguiles.'

At the close of the last century, Heyne, a German rationalist, attempted to generalise the fact in so positive a manner as to imply a rejection of all the primeval revelations from God. Heyne was quickly followed by a band of disciples, who seem, like the Athenians of old, to have 'spent their time in nothing else, but either to tell, or to hear something new.' Schelling, Eichhorn, G. L. Bauer, and Wegschneider, distinguished themselves, amidst a host of lesser lights, by insisting that as the old Egyptians, Persians, Celts, Goths, and Scandinavians had their *myths* in the records of their ancestral exploits, it was the same with the Hebrews in ancient times. To such critics the Bible was of no more authority than any other book; and pronounced by Eichhorn, in his *Einleitung*, to be of no greater historical value 'than an old chronicle of Indian, Greek, or Roman legends.' Volney declared that there were—

Absolutely no other monuments of the existence of Jesus Christ as a human being, than a passage of Josephus, a single phrase of Tacitus, and the Gospels. But the passage in Josephus is unanimously acknowledged to be apocryphal, and to have been interpolated towards the close of the third century; and that of Tacitus is so vague, and so evidently taken from the deposition of the Christians before the judges, that it may be ranked in the class of evangelical records. So that the existence of Jesus Christ is no better proved than that of

Osiris and Hercules, or that of Fo or Buddha, with whom the Chinese continually confound him.—Quoted in Faber's *Origin of Pagan Idolatry*, iii. 649.

Puffed up with self-flattery, these remorseless critics pushed on their investigations until they dreamed they had stormed the citadel and exploded the fable concerning the death and resurrection of Christ, and so had only to sit down on the ruins they had made, and proclaim the reign of anti-supernaturalism, soon to be followed by nominal pantheism and real atheism. G. L. Bauer declared—

> Myths are historical tales concerning the most ancient history of the earth and of men, particularly of single tribes or nations, united with conjectures and theories in the garb of histories, upon *cosmogony* and *geogony*, the physical causes of things, and the objects of sense, all worked up into the miraculous, and by degrees dressed out in a variety of ways.—*Hebräische Mythologie*, vol. i. p. 3.

And so Wegschneider, in his *Institu. Theolog.*, affirmed that—

> Every system of religion which professes to be derived from a supernatural and immediate revelation of the Deity was enwrapt in *mythic* representations.

It must not, however, be forgotten that there are others who have adopted the *mythic* hypothesis relative to the *Mosaic Cosmogony*; but who are as far removed from scepticism in reference to the inspiration of the Bible as any of its most strenuous upholders. Thus the late Alexander Geddes wrote on this subject:—

> I believe it to be a most beautiful *mythos* or philosophical fiction, contrived with great wisdom, dressed up in the garb of real history, adapted to the shallow intellects of a rude barbarous people, and perfectly well calculated for the great and good purposes for which it was contrived; namely, to establish the belief of one supreme God and Creator, in opposition to the various and wild systems of idolatry which then prevailed; and to enforce the observance of a periodical day, to be chiefly devoted to the service of that Creator, and the solacing repose of His creatures. This hypothesis of a mere poetical *mythos*, historically adapted to the senses and intellects of a rude unphilosophical people, will remove every obstacle, obviate every objection, and repel every sarcasm, whether it come from a Celsus or Porphyry, a Julian or a Fredric, a Boulanger or a Bolinbroke.—Geddes' *Translation of the Bible*, vol. i. *Critical Remarks.*

And so the late Professor Baden Powell, although he regards the first chapter of Genesis as 'embodying com-

monly received ideas which Moses was *inspired* to adapt and apply to the ends of religious instruction,' yet declares that 'magnificent' as was its composition, it was 'not intended for an historical narrative, nor designed for literal history,' but is constructed of 'the most sublime and unrivalled imagery—the language of figure and poetry,—*mythic* poetry.'—*Connexion of Natural and Divine Faith*,' p. 250, &c.

And in a subsequent work, Professor Powell explains that—

> He did not assert dogmatically that the description of the creation, taken as a whole, might be understood as couched in the language of *mythic poetry*, but simply suggested as a less harsh alternative than a naked statement, which might seem directly impugning the truth of the narrative. If the true statement be not boldly made by the friends of Christianity, it will inevitably be perverted, and turned against them by their adversaries.—*Supplement to Tradition Unveiled*, p. 36.

Professor Powell's brother essayist, Mr. Goodwin, takes an entirely different view. For speaking of Genesis chap. i., in his essay on the *Mosaic Cosmogony*, he says:—

> Remarkable as this narrative is for simplicity and grandeur, it has nothing in it which can be properly called *poetical*. It bears on its face no trace of *mystical* or symbolical meaning. Things are called by their right names, with a certain scientific exactness widely different from the imaginative cosmogonies of the Greeks. . . . It can scarcely be said that this chapter is not intended in part to teach and convey at least some physical truth, and taking its words in their plain sense, it manifestly gives a view of the universe *adverse to modern science*. . . . Modern theologians have directed their attention to the possibility of reconciling the Mosaic narrative with those geological facts which are admitted to be beyond dispute. In truth, however, if we refer to the plans of conciliation proposed, we find them at variance with each other and mutually destructive. The conciliators are not agreed among themselves, and each holds the views of the other to be untenable and unsafe. The ground is perpetually being shifted, as the advance of geological science may require. *The plain meaning of the Hebrew record is unscrupulously tampered with*, and in general the faith of the whole process lies in divesting the text of all meaning whatever. . . . Believing, as we do, that if the value of the Bible as a book of religious instruction is to be maintained, it must be not by proving it to be scientifically exact, at the expense of every sound principle of interpretation and in defiance of common sense, but by the *frank recognition of the erroneous views of nature* which it contains, we have put pen to paper to analyse some of the popular conciliation theories. The enquiry cannot be deemed a superfluous one, nor one

which in the interests of theology had better be left alone. Physical science goes on unconcernedly pursuing its own paths. *Theology*, the science whose object is the dealing of God with man, as a moral being, *maintains but a shivering existence*, shouldered and jostled by the sturdy growths of modern thought, and bemoaning itself for the hostility which it encounters.—'Mosaic Cosmogony' in *Essays and Reviews*, pp. 208, &c.

Although Mr. Goodwin here contends that 'the Hebrew Record,' or, in other words, Holy Scripture, 'gives a view of the universe adverse to modern science,' and that the defenders of Scripture 'unscrupulously tamper with its plain meaning,' instead of frankly recognising 'the erroneous views of nature which it contains,' and that in the presence of modern science 'theology maintains but a shivering existence,' it is somewhat singular that when Bishop Colenso subsequently adopted a still bolder tone of antagonism to the Divine Record, and was at once challenged[1] by the then head of one of our theological colleges to prove the truth of his assertions, both Bishop and layman appear to have shrunk from the contest. Just as Roman Catholics have always treated the challenge of Bishop Jewell affixed to Paul's cross three centuries ago, they avoided taking it up; they doubtless thought discretion the better part of valour, because they were conscious of their inability to substantiate the charges they had brought against the integrity and inspiration of the Bible.

The *first* argument which Mr. Goodwin adduces against the truth of the Mosaic record will afford an insight into the nature of the objections which he brings forward, as

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[1] The *Times* of April 6, 1863, contains a letter from Dr. Baylee, head of St. Aidan's College, addressed to Bishop Colenso, in which the writer affirms and is prepared to maintain that 'the Hebrew Old Testament, as God gave it, does not contain one misstatement in science,' and that it is the only Book 'which gives a true account of the original creation: it alone accounts for the geological changes of the crust of this earth; it alone contains a true system of philosophy; it alone contains a true system of theology.' Although this challenge was declined, Bishop Colenso had no hesitation in asserting, in a paper read before the *Anthropological Society of London* on May 16, 1865, that 'The elementary truths of geological science flatly contradict the accounts of the Creation and the Deluge. The simple facts revealed by modern science are utterly irreconcilable with Scripture statements.'

sufficient, in his opinion, to destroy all confidence in the teaching of Scripture. Hence he declares :—

The Hebrew records manifestly countenanced the opinion of the earth's immobility, and certain other views of the universe very incompatible with those propounded by Copernicus.

The proofs of this strange assertion, however, are not taken from the Mosaic record, for the simple reason that Moses says nothing on the subject, but from certain passages in the *Psalms*, as Mr. Goodwin says :—

In regard to such a text as, 'The world is established, *it cannot be* moved' (Psalm xciii. 1), though it might imply the sacred penman's ignorance of the fact that the earth does move, yet it does not put forth this opinion as an indispensable point of faith. . . . The Romish Church, it is presumed, adheres to the *old views* to the present day, which are explained by the official proceedings against Galileo, when he was compelled to sign his celebrated recantation, acknowledging the proposition, that the sun is the centre of the world and immovable from its place, is absurd, philosophically false, and formally heretical, because it is expressly contrary to Scripture.—*Essays and Reviews*, pp. 207, &c.

What Mr. Goodwin means by the old views are defined by Voetius, a Dutch divine of the seventeenth century, in the following manner :—

We affirm that the sun flies round the earth every twenty-four hours, and that the earth rests immovable in the centre of the universe, with all divines, natural philosophers, and astronomers, Jews and Mahommedans, Greeks and Latins, excepting one or two of the ancients and the modern followers of Copernicus.

It is gratifying for us to know that this exception of 'one or two' includes some very celebrated names, as Plato in the *Timæus* says :—

The Deity made the earth to be the nurse of mankind, and by her *rotation* (ἰλλομένην) *round the cosmical pole*, the guardian and creator of day and night.

On which passage Aristotle thus comments :—

All those who do not make the earth the centre of the system, make her *rotate round the centre*; and some of those who place her at the centre, say she rotates (ἴλλεσθαι) round the cosmical axis, as we read in the *Timæus*.—Aristotle *De Cœlo*, ii. § 13.

Instead of Mr. Goodwin bringing forth the case of Galileo as a proof of the antagonism between Scripture and Science, it ought to have been adverted to as conclusive evidence against the infallibility of the Roman See,

which is in this predicament: it must either deny the annual and diurnal motion of the earth, or must admit that it is fallible. It seems to prefer the first horn of this dilemma, as in the last edition of Newton's *Principia* published by the Jesuits, there is prefixed the following cautious avowal:—

> Newton, in his third book, adopts the hypothesis of the earth's motion. And we are unable to explain his propositions without admitting the same hypothesis. Hence we are compelled to assume a character different from our own, for we profess obedience to the decrees promulgated by the Popes against the motion of the earth.—Newton's *Principia*, edited by the Jesuits Le Sueur and Jacquier, 1823.

Had Mr. Goodwin a more perfect knowledge of the language in which Moses wrote, he would not have committed such a mistake as to accuse Scripture of teaching 'the immobility of the earth.' A reference to the Hebrew lexicon would have shown him, as Gesenius expresses it, that the word *Môt*, translated 'move,' means, 'To waver, to shake, to totter.' Hence, when we meet with such passages in Scripture as applied to *man*—'Because Jehovah is at my right hand I shall not be *moved*,' *Psalm* xvi. 8; and 'Jehovah will not suffer thy foot to be *moved*,' *Psalm* cxxi. 3; or as applied to the *earth*, 'The world is established that it cannot be *moved*,' *Psalm* xciii. 1; and 'Jehovah laid the foundations of the earth that it should not be removed for ever,' *Psalm* civ. 5; or in a multitude of other places in Scripture where the same word is used, we see at once that, so far from countenancing the idea of the immobility of the earth, as the essayist asserts, the word would rather seem to imply motion, as David prays, 'Hold up my goings in thy paths, that my footsteps be not *moved*' (marg.), *Psalm* xvii. 5.

From these passages we learn the real teaching of Scripture on this subject, viz., that the world has been so firmly fixed by its Creator that it cannot totter, or be displaced, not even in that velocity of motion with which it flies round the sun. A moment's suspension of the law of gravitation would be simply annihilation to the world, but God has so ordered and immovably established the motions of all the heavenly bodies, that no displacement or totter is possible; and this is what Scripture teaches when we read the sublime statement of the Psalmist—

'The world also is established that it cannot be *moved*,' but the true meaning of which has been so grievously perverted by the pretentious criticism of the present day. Mr. Goodwin's charge of scientific inaccuracy of the Bible is simply a blunder, which it is most discreditable for him to have made. In a similar manner, he objects to Archdeacon Pratt's conclusion, as expressed in his *Scripture and Science not at Variance*, that 'Scripture was not designed to teach us natural philosophy, and it is vain to attempt to make a cosmogony out of its statements,' asserting, in opposition, that—

The world at large will continue to consider the account in the first chapter of Genesis to be a cosmogony. But as it is here admitted that it does not describe physical realities, but only outward appearances, that is, gives a *description false in fact*, and one which can teach us no scientific truth whatever, it seems to matter little what we call it.—*Essays and Reviews*, p. 236.

I do not think that the essayist has properly interpreted the Archdeacon's meaning, but, without stopping to enter into a discussion on this point, it will be sufficient to disprove his serious charge against the Mosaic narrative, of being 'false in fact,' by showing that it was never meant to describe any series of phenomena anticipative of modern discovery in astronomy, or geology, or any other branch of knowledge in the precise phraseology of science in the present day, or that Moses wrote one thing while intending to mean another.

The late Dr. Pye Smith, in his work on *The Relation between the Holy Scriptures and some Parts of Geological Science*, has a very happy idea on this subject; he supposes himself permitted to question the author of Genesis as follows:—

Faithful prophet! when you gave forth your account of the creation, what was your own belief and understanding? What did you know, what did you intend to convey, concerning the antiquity and extent of the universe; concerning the heavenly bodies, their number, order, magnitudes, motions, and distances; concerning light and air, land and water, plants and animals? Had you any idea of the natural knowledge which would be acquired under the leading and blessing of Jehovah Elohim thirty-three centuries after you?

He would reply:—

Most certainly not. In all these things I partook of the general knowledge of my contemporaries. I knew no more of the philosophi-

cal realities of nature, than I did of the most abstract spirituality of God, when I spoke of Him as looking, seeking, trying, learning, improving in knowledge, repenting, grieving, changing his mind, coming and going, and having the bodily organisation of a man. If questions ever rose in my mind upon these subjects, I remembered my ignorance and weakness, and I said with duteous humility, Behold, God is great and I know Him not; with God is terrible Majesty; touching the Almighty, I cannot find Him out; God spake to me mouth to mouth, even apparently, and not in dark speeches; and the similitude of the Lord I did behold. *I spoke and wrote as I was moved by the Holy Ghost.* I wrote the things which I was directed to write; but I could not have made a comment upon them.

To this supposed reply on Moses' part, the same author adds:—

Of one thing we are certain. God's design was not to teach error. But we also know that *His modes* of teaching are not bound to any prescribed model: He exercised the sovereignty of His wisdom in this, as in every other part of His rectorial system. And we further know that, in all the Mosaic writings, the perfections, purposes, and acts of Deity are represented in language which, though of the lowest condescension, yet is not arbitrary; for the usage rests upon a common principle, *analogy*, and it is therefore capable of being explained upon sure grounds.—Pp. 438–9.

Feeling assured, with the unvarying testimony of the Church of God during the last thirty-three centuries, that Moses, in his account of creation, 'spake as he was moved by the Holy Ghost,' we know it was as impossible for the narrator to err in its transmission, or, to use Mr. Goodwin's words, to give 'a description false in fact,' as it was 'impossible for God to lie' in the revelation thereof. Hence the important nature of our present enquiry consists in this—What did God design us to understand by the revelation which He made to Moses? What was the intent of the Author of inspiration?

With this enquiry in view, I shall endeavour to establish two Propositions as follows:—

1st. That the Mosaic Cosmogony is proved to be true by the discoveries of modern science; and therefore that its author must have written it by the direct inspiration of God.

2nd. That the Cosmogonies of heathen nations contain internal evidence exactly the reverse; and that such must therefore be considered the vain invention of men.

1st Proposition—That the Mosaic Cosmogony is proved to be true by the discoveries of modern Science, and therefore that its author must have written by the direct Inspiration of God.

Genesis i. 1. 'In the beginning God created the heavens and the earth.' In these few words we have the germ of all Theology as well as of all true Science, which has been discovered after so many years' toil by the skill and ingenuity of man. In this opening sentence of the divine record, we are able to see some of the most prominent characteristics of the books of Moses—the simplicity and conciseness of an early age—the consciousness of the narrator that he spoke by inspiration, as well as his firm belief in the truth of this revelation, together with the assertion of the most grand and comprehensive doctrines. No studied introduction precedes the narrative. No attempt is made to prove the existence of God, or to disprove the eternal existence of matter. The history opens directly with the assertion of a great fundamental truth, which must ever form the basis of all true religion, as well as of all sound philosophy—the production from non-existence of the material universe by the power of the eternal, self-existent God.

In our investigation of this simple yet most sublime passage of Holy Writ, three questions naturally arise which require some consideration.

1st. Who is the Creator here revealed? 2nd. When this creation took place. 3rd. What it was that was then created.

1st. The Author of creation is here termed by Moses *Elohim*, or God in His general aspect to nature and man, and not in that special aspect in reference to the Hebrew commonwealth, and to the work of redemption, indicated by the name *Jehovah*. The first is His name as 'The Almighty Creator;' the second as 'The Self-Existent,' He who was and is to come, in more especial relation to His moral government. In the early chapters of Genesis *Elohim* is used when referring to creation; Jehovah when speaking of redemption; but with a conjoint use of the terms in passing from the records of the creative work to those of human history. In the later books, except

under peculiar circumstances, the terms are used as synonymous.

It is not necessary to dwell upon the etymology of *Elohim*, whether, as some consider, it signifies the 'object of adoration,' from the Arabic *alaha*, 'he worshipped;' or as Gesenius explains it, 'The Strong and Mighty One;' but we must not pass by the significant fact that in this sentence we have a plural nominative, 'Gods,' joined to and governing a singular verb, 'created.' Various hypotheses have been proposed to account for this; the latest idea being that it points to the primitive polytheism of the ancients. It will, however, be more natural if we refer to those to whom the words were addressed, and who, it may be presumed, understood the genius of their own language better than any non-Jewish Biblical critic can do in the present day.

Before doing so it will be right to note, that so far from the plural nominative for God pointing to the primitive polytheism of the ancients, the influence of this idolatry was the chief antagonism which the Hebrew monotheism had to encounter; and we know how repeatedly the Israelites were led astray by its allurements. To guard against this danger, it was absolutely necessary that no place should be left for the introduction of polytheism, by placing the whole work of creation and providence under the sole jurisdiction of the One God, subsequently revealed in a more complete form as the Triune Jehovah. And so we find that the chief heathen cosmogonies, whether Hindoo, Chinese, Pythagorean, or Orphic, so far as regards the Being who was considered as the animating soul and demiurgic principle of the Universe, seem to have some faint conception of the Trinity, as seen in the words of the Oracle, which Patricius cites from Damascius: '*Through the whole world shines a triad, over which presides a monad.*'

But we have to consider what the Jewish mind understood by *Elohim*. In one of their ancient books, termed 'Zohar,' written by Simeon Bar Jarchai while their Temple was yet standing, the name is thus explained: 'There are three Lights in God; the ancient light, or *Kadmon*; the pure light, or *Zach*; the purified light, or *Mezuchzach*, and these three make but one God.' And so Rabbi José

says: 'Come and see the mystery in the word Elohim, viz., there are three degrees, and every degree is distinct by himself, and notwithstanding, they are all One, and tied in One, and One is not separate from the other.'

Again, the Cabalists, speaking of *Jehovah*, call the first Person *Ain Soph* or Infinite, who is THE FATHER; the second Person they call *Cochma* or WISDOM, and also the *Dvar* or THE WORD; the third Person they call *Beena* or Understanding, and *Rooch-hakodesh* or The HOLY SPIRIT.

Further, the book 'Zohar,' of such high authority amongst the Jews, interprets the passage in Proverbs xxx. 4, 'What is His Son's name?' as emphatically THE MESSIAH. And the Jerusalem Targum (written, some suppose, as early as the Babylonish captivity), in its comment on Exodus xxxiii. 9–11, declares: 'The Word of the Lord has appeared on three remarkable occasions,—first, at the creation of the world; second, to Abraham; third, at Israel's departure out of Egypt; and a fourth time He shall appear in the person of Messiah!' There can be, therefore, little doubt that the well-instructed Jew before the Gospel was revealed, understood the word *Elohim* to point to the doctrine of the Trinity in Unity; and this caused the writers of the New Testament to assert the agency of the second Person in the work of creation, as David had done in the Old. (Compare Psalm xxxiii. 6; John i. 1; and Hebrews i. 2; xi. 3.)

2nd. But *when* did this work of creation take place? 'In the beginning' is the reply of Scripture; and that this refers to *time*, and not to *order*, the following considerations may show. The omission of the definite article by the LXX. in their rendering of Genesis i. 1, as also by St. John i. 1, in his assertion of Christ's Godhead, alike prove this. Not only English divines, but foreign commentators of the most opposite schools, affirm that the first words of St. John express *duration* or *time* previous to creation. *Alford* says, 'In the beginning' is equivalent to 'Before the world was.' *Tholuck* declares it expresses 'eternity *à parte ante*.' *Lücke* says the phrase 'In the beginning' includes the idea of pre-mundane existence, and answers to the expression in John xvii. 5, 'Before the world was.' *Mayer* translates it *Vorzeitlichkeit*, and considers it equivalent to the LXX. version of Proverbs viii. 23, 'In the

beginning, before God made the earth.' All these agree that the expression of Genesis i. 1, denoting the *when* of creation, must refer to *a time prior to the existence of heaven and earth.*

3rd. Before considering *what* it was that was then created, it may be well to notice the exact meaning of the word used by Moses in expressing 'creation.' Mr. Goodwin says it is immaterial whether it is to be understood as affirming 'that God shaped the whole material universe out of nothing or out of pre-existing matter;' but to this we reply, that it is material for us to know what God intended to teach in the words employed. In this instance we refer, as before, to those who are best qualified to instruct us on the subject. Hence we find Maimonides teaching:—

> Those who believe in the laws of our master Moses, hold that the whole world, which comprehends everything but the Creator, after being in a state of non-existence, received its existence from God, being called into existence from nothing. . . . It is a fundamental principle of our law, that God created the world from nothing.

The act is expressed by the Hebrew word *Bara*, which is used to express creation of matter out of nothing; and as such it is applied throughout Scripture, I believe, exclusively to God as the agent, and not to any human work. Thus, e.g., David, speaking of the universe and all therein, says, 'Jehovah commanded and they were *created*.' Psalm cxlviii. 5. And so Isaiah: 'Thus saith Elohim Jehovah, He that *created* the heavens and spread them out.' Ch. xlii. 5. And Malachi likewise: 'Have we not all one father? hath not one God created us?' Ch. ii. 10. In all these passages the word *bara* is employed; and if it does not mean to 'create' in the highest sense, i.e. 'out of nothing,' then the Jews had no word in their language to designate this idea. It is true that it is occasionally employed, like its English representative, in a secondary sense, but this in no wise detracts from its force when strictly and literally used.

The Jewish Rabbis, who are the best judges in such a case, are unanimous in asserting that the word *bara* expresses the commencement of the existence of anything, or its egression from nonentity to entity. The modern notion of certain sceptics, that God formed all things out of pre-existing eternal nature, is absurd, for if there was

an eternal nature besides an eternal God, there must have been two self-existing, independent, eternal Beings, an idea which at once refutes itself. It is therefore to be regretted that a distinguished *savant* like Sir Charles Lyell, in his *Principles of Geology*, should speak of 'admiration strongly excited, when we contemplate the powers of insect life in the creation of which *Nature* has been so prodigal' (a subsequent edition has happily replaced the word '*Nature*' by '*Author of Nature*'), unless the term is explained as in Dr. Roget's *Bridgewater Treatise*, who justly writes :—

In order to avoid the too frequent and consequently irreverent introduction of the Great Name of the SUPREME BEING into familiar discourse on the operations of His power, I have, throughout this treatise, followed the common usage of employing the term NATURE as a synonym expressive of the same power, but veiling from our feeble sight the too dazzling splendour of its glory.—Vol. i. p. 13.

Moreover, by rendering *bara* as 'original creation out of nothing' we have a better understanding of the words which follow, as the translation in A.V. of 'the heaven and the earth' falls somewhat short of the exact force of the original. In the Hebrew each substantive is preceded by the particle את *âth*, which is always understood by Jewish commentators to imply something more than is expressed, and the only English word which conveys its full meaning is, as any Hebrew Lexicon will show, 'Essence' or 'being.' Hence Buxtorf in his Talmudic Lexicon says, 'The particle את with the Cabalists is often mystically put for *the beginning* and *the end*, as Alpha and Omega are in the Apocalypse.' The Syriac version has *Yoth*, which signifies 'Essence' or 'Substance,' and is thus rendered in Watton's Polyglott, ESSE *cœli et* ESSE *terræ*.

By this we learn that *the what* of creation signifies the original matter or essence out of which God formed the Universe. Hence the full meaning of the first sentence of the Bible is conveyed in these words :—

IN THE BEGINNING, BEFORE THE WORLD WAS, ELOHIM (*the triune Jehovah*) CREATED OUT OF NOTHING THE ESSENCE OF THE HEAVENS AND THE ESSENCE OF THE EARTH.

By the term 'Essence of the Heavens' we understand the whole Universe, including both our solar system, and also the astral heavens, consisting of those 'fixed stars' which shine by their inherent light, and have therefore been appropriately termed 'Suns to other systems,' each

one having, as we may infer from analogy, its attendant train of primaries with their respective satellites.

By the term 'Essence of the earth' we understand the original matter of the globe, including all those various formations brought to light by geology, previous to its being adapted to the occupation of man. These formations are supposed at present to include thirty marked periods of animal and vegetable existence, separated from each other by distinct catastrophes.

It is rather more than a century ago that the element of time fairly took its place in geological science. The late Dr. Whewell, in his great work on the *History of the Inductive Sciences* (vol. iii. p. 413), mentions that in the year 1759 Arduino deduced, from original observations, the distinction of rocks into *primary*, *secondary*, and *tertiary*, and that the relations of positions and fossils were from this period inseparably associated with opinions concerning succession in time. These formations have been generally divided by geologists under the following five heads. 1st. The first crust of the earth as it has hitherto been considered, and which, as showing no sign of organised life, is commonly called *Azoic*. Then comes the *Palæozoic*, wherein the earliest fossils have been discovered, followed by the *Mesozoic* or middle period, and *Cainozoic* or more recent. Last of all come the diluvial layers of matter upon which the superficial soil is spread, commonly known as the 'Post-tertiary,' referring, as I believe, to the preparation of earth for the reception of man, as set forth in the Mosaic Cosmogony under the term of the 'six days' creation.'

But the progress of geological science has already given a violent wrench to one part of this theory, and who can say that time may not do the same for the rest? For it now appears that the hypothesis of the primary crust of the earth being *Azoic* turns out to be a myth, as Sir Charles Lyell, in the *last* edition of his *Principles of Geology*, distinctly admits, as he now writes:—

> The progress of geological investigation gradually dissipated the idea, at first universally entertained, that the granite or crystalline foundations of the earth's crust were of older date than all the fossiliferous strata. It has now been demonstrated that this opinion is so far from the truth, that *it is difficult to point to a mass of volcanic or plutonic rock which is more ancient than the oldest known organic remains.*

Similarly to the haziness under which geologists have been so long labouring as regards the proper place of the *Azoic* period, the same may be said in reference to the earliest signs of life in the *Palæozoic*. Until recently, it has been supposed that these were to be found in the Silurian formation, prominent in South Wales, and so named after the Ancient British tribe which occupied that part of the country. Hence Mr. Goodwin, in *Essays and Reviews*, p. 214, says that 'the *first* records of organisms present themselves in the so-called Silurian system.' But considering that this was written in 1860, it is somewhat surprising that one so hostile to the truth of the Mosaic record, and so ready to find fault with opinions differing from his own, should have been ignorant of the fact that fifteen years *before* it had been proved that 'the so-called Silurian system' did not contain the *first* signs of organic life. For as early as the year 1845 it was known that there were two series of stratified rocks in Canada, older than the Silurian, called the Upper and Lower Laurentian beds, which have been thoroughly explored by Sir W. E. Logan, as set forth in his report on the Geology of Canada. He discovered a species of worm in the Lower Laurentian strata, to which the name of the *Eozoon Canadense* has been given, and which is the oldest fossil that has *yet* been discovered on earth. Sir W. Logan's words should induce caution in speculating on these subjects, as he says:—

> Interstratified with the Laurentian limestones there are beds of conglomerate, the pebbles of which are themselves rolled fragments of still older laminated sand-rock, and the formation of these beds leads us *still further into the past*. . . . Of these calcareous masses, it has been ascertained that *three*, at least, belong to the lower Laurentian. But as we do not yet know with certainty either the base or the summit of the series, these three may be conformably followed by *many more*.—*Quart. Journ. Geolog. Soc.* 1865, pp. 46, 47.

Another source of dispute amongst modern *savans* relating to the 'essence' of the earth, concerns its origin, whether it should be traced to fire or water. And the sharp discussions between the Vulcanists and Neptunists at the commencement of the present century furnishes us with a remarkable instance of the great uncertainty of Geological Science. Lardner, in his *Pre-Adamite Earth*, § 187, says:—

> The globe consisting originally of matter in a state of *igneous* fusion,

being put in a state of rotation, assumed, as a necessary mechanical consequence of that motion, the form which it still retains, called in geometry that of an oblate spheroid, flattened at the poles and bulging out at the equator.

It was prior to the solidification of its crust that the earth received its present shape, the flattening being due to a bulging out at the equator, caused by the earth's rotation; its form being exactly that which any fluid, whether aqueous or igneous, would take under the circumstances. M. Plateau is said to have proved this by placing a mass of oil in a transparent liquid exactly of the same density as the oil. As long as the oil was at rest, it took the form of a perfect sphere floating in the middle of the fluid, exactly as the earth floats in space; but as soon as a slow motion of rotation was given to the oil by means of a piece of wire forced through it, the spherical form was changed into a spheroidal one, like our globe.

Mr. Goodwin supports the *igneous* hypothesis, as he says:—

The first clear view which we obtain of the early condition of the earth presents to us a ball of matter, *fluid with intense heat*, spinning on its own axis, and revolving round the sun.—*Essays and Reviews*, pp. 213, 214.

On the other hand, Plaff in his *Schöpfungsgeschichte*, p. 3, contends that—

Not only by far the greatest part of our earth was under *water*, but that to water it owes its origin, and that under water the entire gradual formation of these mighty masses took place.

And Sir Charles Lyell adds the weight of his authority, by declaring that—

The doctrine of the pristine fluidity of the interior of the earth and the gradual solidification of its crust, consequent on the loss of internal heat by radiation into space, is one of many scientific hypotheses, which has been adhered to after the props by which it was at first supported have given way one after the other.—*Principles*, &c., p. 211.

While a third authority cautiously speaks of Geology as—

Guessing at conditions of original igneous fluidity, or aqueous plasticity in the mass, and hinting at some great law of secular contraction; but it must be confessed, that on these and similar points science is yet unable to offer anything like the certainty of demonstration.—Page's *Advanced Text-Book of Geology*, p. 25.

We have already seen how uncertain are men of science respecting the time required for the *cooling* of the earth's crust; and the same degree of uncertainty attends the estimate of its *thickness*. Professor Hopkins of Cambridge has come to the general conclusion, that 'the minimum thickness of the crust of the globe, consistent with the observed amount of precession, cannot be less than one-fourth of the earth's radius,' i.e., about 900 miles. Whereas Professor Haughton of Dublin maintains that such calculations rest upon an arbitrary hypothesis, and are of no real value, as the earth's crust *may be either* 10 or 1,000 miles in thickness. Should further discoveries decide in favour of either view, it will tend to confirm the harmony between Scripture and Science, in teaching that an immeasurable period of time has passed since the Almighty spake this world into being, and which is so concisely stated in the Divine Record, '*In the beginning* God made the heaven and the earth.'

It may be fairly assumed that this sentence of Holy Writ, the first of God's revelation to man, affords sufficient warrant for declaring the dogma of Theology in respect to the period of creation. Professor Huxley, however, thinks otherwise; for in his address to the clergy at Sion College, November 21, 1867, he expresses himself as follows:—

> You tell your congregations that the world was made 6,000 years ago in the period of six days. Thus you hold and teach that men of science like myself, are liable to pains and penalties, as men who are guilty of breaking or disputing great moral laws. I am bound to say I do not believe these statements you make and teach, and I am further bound to say that I do not, and cannot call up to mind amongst men who are men of science and research, truthful men, one who believes those things, but, on the other hand, who do not believe the exact contrary.

Concluding that Professor Huxley's acquaintance with the clergy is as limited as his attendance at church must evidently be, we need feel no surprise at the number of misstatements contained in the short extract given above. And we scarcely know how we can better answer them than by relating a little incident which once occurred in Paris. The *Academy of Science* having sent M. Dupin a copy of one of their works on Natural History, in which *a crab* was defined as 'a red fish, which walked backwards,' received from the wit the following reply: 'Admirable!

Gentlemen, your definition would be perfect, save for this, the crab is *not* a fish, its colour is *not* red, and it does *not* walk backwards!' Even so may we confidently declare, that the clergy do *not* tell their congregations that 'the world was made 6,000 years ago in six days,' neither do they hold and teach that anyone is 'liable to pains and penalties' for asserting the contrary—nor 'guilty of breaking or disputing great moral laws' in teaching the same. I can truly say, that in the whole course of my life, now extending to over half a century, I never met but one who held the opinions which Professor Huxley so strongly condemns; and though I knew him to be 'a truthful man of science and research,' he happened to be a *layman!*

So much for Professor Huxley's charges against the clergy, in that extraordinary address which he thought fit to deliver in defence of his own theories; and the whole of which is as full of errors as that part to which I have already called attention. I am inclined to think that it was a bold attempt on his part to see how far he might venture to trespass on the patience and credulity of his audience. That he did not believe what he was saying, or that he could not defend his oracular dogmas, is quite evident from these two facts. When asked by a layman, then present, to support one of his fallacies relating to the 'Atlantic ooze' he was discreetly silent, thereby owning himself vanquished; and when subsequently invited to defend his assertions before the *Victoria Institute* or *Philosophical Society of Great Britain*,[1] with the assurance that he should have a respectful hearing, he declined to avail himself of the invitation to attend on what he was pleased to term 'the Victoria Tribunal.' I refrain from characterising the address of Professor Huxley to the clergy, nor would I quote the opinion of any of my reverend brethren, as it might be thought that

[1] It may be well to explain, that the declared object of the *Victoria Institute*, which has been formed about four years, is to 'investigate fully and impartially the most important questions of Philosophy and Science, but more especially those that bear upon the great truths revealed in Holy Scripture,' and also 'to associate together men of science and authors who have already been engaged in such investigations, and all others who may be interested in them.'

our profession prevents us from being unbiassed in the matter; but I avail myself of the publicly expressed opinion of Admiral Gardiner Fishbourne, R.N., C.B., who was present on the occasion, and who, at a subsequent meeting of the Victoria Institute, stated that 'the impression on his mind was, that it was one of the most insulting addresses he ever heard.'

If, therefore, there be any who still cling to the old and mistaken idea that the creation of man was contemporary with the creation of the Universe, to such we say that if Geology is confined to *guessing* as to the time required for the various formations which constitute the crust of the earth, the older and more perfect science[1] of Astronomy speaks with unerring certainty of the millions of years which have flown away since creation began.

Roëmer's brilliant discovery, during the last century, of the velocity of light, in its transit through space, has gradually unfolded the following facts:—1st. That Light, which is known to fly at the rate of upwards of 191,000 miles each second of time, passes from the sun to the earth in less than nine minutes, and to Neptune, the most distant planet in the solar system, in about four hours. 2nd. That Light from *a Centauri*, the nearest of the fixed stars, takes three years in its transit to earth; and from Capella, the most distant for which a parallax has yet been discovered, seventy years are consumed in the transit of light.

Proceeding by analogy, Sir William Herschel estimated that light from the nebulæ in the constellation of Hercules (so distant that it requires Lord Rosse's telescope to resolve it into stars) does not reach the eye until 60,000 years have rolled by since its beams have quitted the region of the heavens wherein it lies; and that the still greater period of 330,000 years is required for the transit of light from the nebulæ on the outer extremity of the Milky Way.

[1] At a meeting of the *Victoria Institute*, held December 16, 1867, to consider the subject of *Geological Chronology*, the Rev. Daniel Greig declared that though 'Geology was generally termed a science, it never could be more than the merest conjecture. It differed essentially from mathematical or mechanical science, as well as from chemistry. You can only reason with certainty from cause to effect, and when you draw inferences from effect to cause, as in Geology, you *only conjecture*.

Or vaster and vaster still, to adopt the language of Professor Nichol in his *Stellar Universe* :—

> If we take the guidance of analogy, it may be asserted without hesitation, although not apart from a feeling next to overwhelming, relating to the awful realities within which our frail lives are passing—that if any of those milky nebulæ—nebulæ first seen by the six-feet mirror, and left irresoluble until art shall achieve some new and mighty advance; if any of these are like the grand object in Orion, they may be so far off in space, that light does not reach us from them in less than THIRTY MILLIONS OF YEARS.

It may be right to notice an objection brought forward by Mr. Goodwin against the truth of the Mosaic Cosmogony, which he thus states :—

> It must be observed that in reality two distinct accounts are given us in the Book of Genesis, one being comprised in chapter i., and the first three verses of the second, the other commencing at the fourth verse of chapter ii., and continuing until the end. This is so philologically certain, that it were useless to ignore it.—*Essays and Reviews*, p. 217.

Another of the Essayists, Professor Jowett, declares that—

> As the time has come, when it is no longer possible to ignore the results of criticism, it is of importance that Christianity should be seen to be in harmony with them.—*Ibid.* p. 374.

Cordially assenting to the remark as to the importance of seeking to find the harmony which has ever existed between Revelation and Science, it is to be supposed that Mr. Goodwin has not yet made himself master of the subject on which he so confidently speaks; for as far as modern criticism is concerned there are few questions of Biblical interpretation philologically *more uncertain* than the unity or the duplicity of the Mosaic Cosmogony in the first two chapters of Genesis. And this is not a difference between the Orthodox and the Rationalistic Schools, for neither the one nor the other can agree amongst themselves. e.g. Hegstenberg, Kurtz, Baumgarten, and Hofmann differ from Hävernich, Ranke, and Teile on the one hand; while Ewald, Ilgen, and Knobel are opposed to Eichhorn, Vater, Gesenius, De Witte and Gramberg on the other. Certain Rationalists think that the duplicity of the sacred record is proved by making Genesis ii. 4 the title of the second account; while certain of the Orthodox, on the contrary, are of opinion

that by making that verse the title they prove their unity. Moreover these critics are not agreed on the proper meaning of the term 'Generations' in chapter ii. 4, nor as to the connection between *verses* 4 and 5, or whether there is any connection at all. With such conflicting opinions amongst the most celebrated German critics, and with nothing beyond 'the philological certainty' of Mr. Goodwin's *ipse dixit* to guide us, we must decline to abandon the unity of the record as set forth in the first and second chapters of the book of Genesis, unanimously held by the Church of God, since it was written more than 3,000 years ago, until the middle of the last century, when Astruc first suggested the contrary; neither can the essayist be surprised if sensible men 'ignore a philological certainty' of the existence of which there is not so much as the slightest attempt to prove.

Pass we on then to consider the condition of the earth, when the Creator began to prepare it for the abode of man. The Mosaic record reads according to the Authorised Version—'*And the earth was without form and void; and darkness was upon the face of the deep.*' That this does not mean the *original* condition of the earth is proved by another passage of Holy Writ, wherein it is expressly said—'God himself that formed the earth and made it; He hath established it, *He created it not in vain.*' Isaiah xiv. 18. The expression 'in vain,' תהו *tohu*, is the same as 'without form' of Genesis i. 2; which shows that God did not originally create the earth in that state to which it was subsequently reduced prior to its being prepared for the habitation of man. Hence the passage may be rendered as Dr. Lee, one of the best Hebrew scholars which England has produced, translates it, 'the earth was, existed, remained, empty,' &c.; or as Dr. Dathe of Leipzig, a cautious and judicious critic, proposed to render it—'But afterwards the earth *became* waste and desolate.'[1] *Post hæc vero terra facta erat vasta et deserta* —a translation which is supported by the fact that the Hebrew verb היה *to be* is repeatedly rendered in the LXX. and Vulgate versions of this chapter by γίνομαι and *fio* instead of by εἰμὶ and *sum*.

[1] In Genesis ii. 7, and iii. 22, the Hebrew verb *hahyah* is translated 'became' and 'is become' as in other places, and as it might be in the passage under consideration.

We may understand this passage to describe the condition of the earth after the termination of what geologists call 'The Tertiary Era,' and before it was prepared for the use of man. Now geology asserts that the disruption of the earth's crust, through which the range of the Alps and other mountain-chains were forced up to their present elevation, terminated the Tertiary Age, and preceded the creation of the human race, together with its concomitant formations in the animal and vegetable world. The waters of the seas, uplifted from their beds by this great *bouleversement*, swept over the continents with irresistible force, destroying the flora and the fauna of the previous period, and burying its ruins in the sedimentary deposits which ensued.

A mistake made by many respecting the fauna and flora then destroyed has been rectified by the researches of M. d'Orbigny, in a way which adds another to the many striking proofs of the harmony between Revelation and Science when rightly understood. For it is well known that individuals propagate in the same species, and never out of one into another more than once. As Dr. Pritchard in his *Natural History of Man* observes:—

> Mules and other hybrid animals are produced among tribes in a state of domestication, but except in some very rare instances occurring in particular tribes of birds, they are unknown in the wild and natural state. Even when individual hybrids are produced, it is found impossible to perpetuate from them a new breed. It is only by returning towards one of the parent tribes that the offspring of these animals is capable of being continued in successive generations.—P. 17.

Experience shows that the race of hybrids is sterile, and unable to continue its species. Sameness of species, therefore, is necessary to physical continuity, which has been usually inferred where sameness of species has been found at two different epochs. It was formerly maintained by Sir Charles Lyell, as I have already pointed out, that there are a large number of pre-Adamite fossils found in the Tertiary which are precisely the same as those now in existence. But M. d'Orbigny's discoveries have shown that this identity of species does not exist. He has succeeded in proving that between the termination of the Tertiary and the commencement of the Human Period there is a *complete break*; which answers to the

interval supposed between the first two verses of Genesis in the narrative of the Mosaic Cosmogony.

Archdeacon Pratt, in his *Scripture and Science not at Variance*, says that—

> The theory of Sir Charles Lyell was for a long time regarded as one of the discoveries of modern science; and the fact which it was supposed to have established was, perhaps, more difficult to reconcile with Scripture than almost anything previously advanced. We must not, however, ungenerously glory over it as an exploded fancy. Science in her onward progress has often had these temporary reverses. It has often happened, too, that facts discovered and embodied in erroneous theory, and even errors made, have had their importance in leading to truth at last. But this lesson we certainly should learn—never to allow a theory, however plausible, to stand forth as an argument against the infallibility of the Word of God.—P. 66.

When this interval, referred to in the second verse, had come to an end, and the seas had settled into their new beds, the latest and greatest act of creation—'the six days' creation' as it is commonly termed—was accomplished by clothing the earth with its present vegetation, peopling the land and water with the existing tribes of birds, beasts, and fishes of the sea, and calling into being the human race, appointed to have dominion over all living things, and to manifest the glory of the Creator by the development of attributes so exalted as to be described by the inspired writer as being originally made 'in the image and after the likeness of God.' The late Hugh Miller, in his *Testimony of the Rocks*, endeavoured to show that 'the six days' creation' represented the whole geological period from the beginning of time. No man had a better right to be heard, both as a profound geologist and as a sincere Christian. And it is impossible not to admire the eloquence and ingenuity with which he endeavours to reconcile the narrative in Genesis with the Testimony of the Rocks in reference to *three* of the Mosaic 'days,' to which number his attempt is confined. But his argument is not convincing; several reasons gathered alike from the sacred text as well as geological science seem to show that such is not the correct interpretation.

The next statement in the Mosaic Cosmogony relates to the creation of light. 'AND GOD SAID, LET THERE BE LIGHT: AND THERE WAS LIGHT.' It may be fairly assumed that in

the whole range of literature from the beginning of time nothing has ever equalled this sublime speech respecting the creation of that to which God has condescended to liken himself; 'for God is Light,' says St. John; or as St. Paul represents Him, 'dwelling in light which no man can approach unto.' It argues at once uncontrollable authority and omnific power. It is recorded that when the LXX. version of the Old Testament was seen by *Dionysius Longinus*, a celebrated heathen critic, it so excited his admiration that he described it in his treatise *On the Sublime* in these striking words:—

> The Jewish lawgiver—who was no ordinary man—having conceived a just idea of the Divine power, he expressed it in a dignified manner, for at the beginning of his laws he thus speaks—'GOD SAID—*What?* LET THERE BE LIGHT! And there was light.'—§ 9.

Happy would it be if some Christians had as true a conception of the Deity as this great heathen philosopher. But it is singular, to say the least of it, that all which Mr. Goodwin and other objectors can allege against its reception as inspired is, that since it represents the creation of light three days *before* the existence of the sun, whence our light is derived, therefore it proves the falsity of the Mosaic Cosmogony.

An objection of this nature was made in olden times, and has been revived in the present day. Origen tells us that Celsus thought it 'absurd to speak of days when there was no sun.'—*Contr. Celsum*, vi. 60. Voltaire adopted the same line of argument. And now Mr. Goodwin declares that 'the idea of light and the measurement of time existing before the manifestation of the sun, is repugnant to our modern knowledge,' adding:—

> We may boldly affirm that those for whom it (i.e. the Mosaic account of the creation of light) was first penned could have taken it in no other sense than that light existed before, and independently of, the sun; nor do we misrepresent it, when we affirm this to be its natural and primary meaning.—P. 219.

We conclude that Mr. Goodwin is unacquainted with Hebrew, or he would have seen that the 'light' spoken of in verse 4, and the 'sunlight' of verse 16, are two different words; but it is surprising that he should have committed such a mistake as to talk of light, independent of the sun, being 'repugnant to our modern knowledge.' For we

may point to this statement in the Mosaic record as affording proof that its author did not venture on any dogma of his own, but 'spake as he was moved by the Holy Ghost.' Had Moses been a mere speculator, well up to the scientific conceptions of his own day, or, as Mr. Goodwin calls him, 'some Hebrew Descartes or Newton,' he would not have recorded the creation of light as prior to the manifestation of 'sunlight.' But in this seeming inconsistency we have one of the strongest testimonies possible to the divine authority of the Mosaic Cosmogony; for modern science has at length discovered that the sun, though supreme in our system, is not the only source of light, but that there is, throughout the endless regions of space, a fine, subtle essence, called ether, which, restrained by no limits, washes the remotest shores of the universe with an invisible ocean, and which is of so refined a nature that the stars move through its depths very slightly affected by what is termed 'the resisting medium.' Hence arise those waves, or undulatory motions, which, spreading with excessive velocity in every possible direction, produce, according to the theory of Huygens, the effect of light.

Now this 'resisting medium' is regarded by the most eminent *savans* as *identical with the luminiferous ether*; for just as certain phenomena of optics require for their satisfactory explanation a vehicle for light, so certain phenomena of astronomy demand for their satisfactory explanation the existence of a subtle fluid such as this luminiferous ether is conceived to be. Hence, Professor Encke in his *Dissertation on the Comet* which bears his name, after stating that the subject had incessantly occupied him for twelve years, observes:—

> Another question, which is properly more physical than astronomical, is this, whether the hypothesis of a *resisting medium* gives the true and probable explanation, though hitherto no other appears to have equal weight.

On this Professor Airy, the Astronomer Royal, observes:—

> There can scarcely be a doubt that the hypothesis of a resisting medium, or something which produces almost exactly the same effects, is the true one.—Airy's translation of *Encke's Dissertation on the Comet*, 1832.

Thus the existence of the luminiferous ether is shown to be a physical reality, and not a mere hypothesis, since it is confirmed by a department of science quite distinct from the science of light and optics.

It is by the properties of this universally diffused ether that not only *light* but also *heat* and probably *electricity* and *magnetism* are supposed to exist. The fact of there being such latent light may be shown by the following experiment. Take two pieces of smooth flint and rub them together in a dark room, and the latent light or caloric matter will be immediately produced and become visible. The existence of this caloric or primitive light may be detected in various other bodies—by rubbing two hard sticks together, or by hammering cold iron, which in a short time becomes red hot, or by the sudden compression of atmospheric air in a tube.

The theory originated by La Place respecting the creation of our solar system, which has been accepted by such *savans* as Professor Mädler of Dorpat, who has extended it to comets, and Humboldt who takes its truth for granted, is an additional proof of light existing independent of the sun. La Place conceived that 'in the beginning' the whole solar system consisted of a mass of vaporous matter, having a central nucleus more or less dense, and the whole rotating on its axis in one uniform direction from west to east. Such a mass would, in condensing by cold, leave in the place of its equator zones of vapour composed of substances which require an intense degree of cold to return to a liquid or solid state. These zones must have begun by circulating round the sun in the form of concentric rings, the most volatile molecules of which must have formed the superior part, and the most condensed the inferior part. In consequence of this revolving motion our globe became flattened at the poles and swollen in the equatorial region, and in consequence of the greatness of the centrifugal force at the equator and the contemporaneous condensation and contraction of the nebulous mass, a free revolving ring, like that of Saturn, detached itself at the equator. This ring not being of uniform density, and in consequence of contraction, broke in one or more places, and these fragments, in obedience to the laws of gravitation, became

spheres or planets, all revolving from west to east round the parent mass. A similar process took place with regard to some of the planets, which thus obtain their moons.[1]—La Place, *Exposition du Système du Monde*, pp. 465 et seq.

According to the theory of La Place, not only the earth, but all the planets of our system, existed before the sun was in its present condition, as giving light to the earth, which did not take place until 'the fourth day' of the Mosaic Cosmogony. And as these planets are not now self-illuminating, it is supposed that the rings when detached from the original mass were dark also, and that the sun did not receive its luminous photosphere until all the planets had been detached from it.

Arago considered that the sun consists, 1st., of a dark central sphere; 2nd., of a vast stratum of clouds suspended at certain distances from the central body; 3rd., of a photosphere, or luminous envelope, surrounding the cloudy stratum. Sir W. Herschel calculated that the light reflected outwards by the clouds was equal to 469 rays out of 1,000, or less than half the light of the photosphere, and that the light reflected by the opaque body of the sun beneath was only 7 rays out of every 1,000. The more recent discoveries of Bunsen and Kirchhoff and others, by means of the spectrum analysis, have somewhat modified these views; and we ought, therefore, to avoid anything like dogmatism in speaking on the subject.

Professor Nichol, in his *Planetary System*, accounts for the primitive light in a somewhat different way from La Place's theory; adducing the following facts as evidence of the earth and planets possessing a certain amount of luminosity independent of the sun, he observes:—

> Our first thought leads us to the Auroras. Whatever their origin, they show the existence of causes in virtue of whose energy the upper strata of our atmosphere become *self-luminous* sometimes in a high degree; for in northern regions our travellers have *read* by their brilliance. But the Aurora is not the only phenomenon which indicates

[1] The moons of some of the planets confirm the truth of the adage, 'There is no rule without an exception;' as the four satellites of Uranus, and the solitary one yet discovered of Neptune, revolve, contrary to all the other heavenly bodies, from *east to west*.

the existence of a power in the matter of our globe to emit light. In the dead of night, when the sky is clear and one is admiring the brilliancy of the stars hanging over a perfectly obscured earth, a cloud well-known to observing astronomers will at times begin to form, and it then spreads with astonishing rapidity over the whole heavens. The light of the stars being thus utterly shut out, one might suppose that surrounding objects would, if possible, become more indistinct. But no! what was formerly invisible can now be clearly seen; not because of lights from the earth being reflected back from the cloud, for very often there are none, but in virtue of the *light of the cloud itself*, which, however faint, is yet a similitude of the dazzling shell of the sun. The existence of this illuminating power, though apparently in its debilitude, we discover also in appearances among the other orbs. . . . There is, therefore, no other tenable conclusion save this. That the matter both of sun and planets is capable in certain circumstances, whose exact conditions are not known, of evolving the energy which we term *light*; and that the atmosphere of the sun is at present under influences favourable to the high manifestation of a power which from the other orbs *has not yet entirely departed.* And thus, for ever, is broken down that supposed distinction which seemed to place our central luminary apart in species, to an immeasurable extent from the humbler worlds that roll around him.

We find another instance of light independent of the sun in the *Rhizomorpha*, a species of fungus, vegetating in dark mines and remarkable for its phosphorescent qualities. In some of the coal-mines of Saxony it is seen in great splendour, giving them the appearance of an enchanted castle; the roofs, walls, and pillars being entirely covered with them, while the beautiful light emanating from them is perfectly dazzling to the naked eye.

The progress of science has therefore dispelled the objection that light could not exist before the sun in its present condition. And it has done even more, for it has rather proved the extreme accuracy of the Mosaic Cosmogony, which persons unacquainted with the Hebrew language necessarily overlook. Moses speaking by inspiration uses different words to express the primitive light, and the luminary which God appointed to 'rule the day.' When he has to describe the creation of light in verse 3, he employs one word, *or*, to denote the 'light' itself; but in speaking of the luminary which rules the day at verse 16, he calls it *maor*, i.e. 'a place or instrument of light,' like a lighted lamp, and exactly what modern science has shown it to be. Hence, as M. Marcel de Serres, Professor of Geology at Montpellier, justly observes in his *Cosmogony of Moses*:—

Scripture does not say that God created the light or made it, but said, *Let it be, and it was.* If, then, light be not a separate and definite body, but only vibrations or undulations of ether, somehow set in motion, the sacred writer could not have expressed its appearance in words more beautiful or more agreeable to truth.

Further, we see that the sacred writer does not tell us that God *then* called into existence the sun and moon, and the stars, for this was done 'in the beginning' when 'He created the heaven and the earth,' but according to the idiom of the Hebrew tongue, 'God said, Let there be *light-holders* in the firmament of heaven to give light upon earth; and it was so. And God *made*[1] two great light-holders, the greater to rule the day, and the lesser to rule the night.' Thus while we have in Scripture an account of the creation of the sun 'in the beginning,' what is termed the work of the fourth day was the preparation or adaptation of it for the use of man.

It is evident that the Mosaic Cosmogony represents the earth as existing for ages before the sun was appointed as its source of light and heat, during which period there could not have been the same difference of climate as exists in different latitudes at the present day, for this depends upon the parts of the earth turned towards the sun. And this agrees with the conclusions of Geology, that before the human period there was no difference in climate, but apparently one uniform high temperature over the whole earth, as the author of the *Vestiges of Creation* remarks:—

In the coal of Baffin's Bay, of Newcastle, and of the torrid zone alike are the fossil ferns arborescent; showing that, in that era, the present tropical temperature, or even one higher, existed in very high latitudes.

And so Dr. Lardner in his *Pre-Adamite Earth*, § 561, observes:—

A striking physical difference between the present and all former periods consists in different divisions of the earth's surface into

[1] It is important to notice that the word *asah*, translated 'made,' signifies 'prepared' or 'appointed,' and is quite distinct from *bara*, which is used when 'created' is meant. As in Exodus xx. 1, 'the Lord made (*asah*) heaven and earth in six days' is quite distinct from Genesis i. 1, where it is said 'in the beginning God created (*bara*) the heaven and the earth;' which afterwards 'He, Jehovah, prepared (*asah*) in six days' for the use of man.

climatological zones, each zone having its peculiar fauna and flora. In all former ages and periods, including those which immediately preceded the present, *no traces of climatic distinctions have been found.* The fossil fauna and flora of latitudes the most different are analogous to the fauna and flora of warm climates. And this uniform temperature can only be ascribed to the great predominance of the effects of the central heat of the earth over those of solar radiation. In the Tertiary period, which immediately preceded the present epoch, it is certain that the higher latitudes had a climate similar to that which now prevails towards the line. To render the fossil fauna compatible with the existence of isothermal lines, it has been supposed that the remains of animals and plants, peculiar to warm climates, which are deposited in the strata of high latitudes, may have been transported there by ocean currents. That such an hypothesis is inadequate and inadmissible, is demonstrated by the universality of the tropical fauna of all periods. The remains, especially of land animals and vegetables, which could by any possibility have been transported by such means, must necessarily have been few and local, and would appear merely as exceptions and anomalies among the fauna and flora proper to climate locality. No such condition of fossil deposits, however, is observed, those of the highest latitudes being as decidedly tropical as those of the lowest.

Various theories have been propounded to account for the change of climate in different localities from what it was in days of yore ; some attributing it to what is called 'the precession of the equinoxes,' others to a 'nutation of the poles,' while a third class seem to think that the northerly action of the ocean is sufficient to account for almost all. It is certain that this alone causes very important geological changes in high latitudes, as it not only carries the *débris* of the vegetation of different climes to the northern hemisphere, but it also conveys a large amount of the alluvial soil from the mouths of the great rivers of South America towards the North Pole.

The late Mr. Evan Hopkins C.E., F.G.S., has shown that this last theory is not sufficient to account for the tropical vegetation which once existed in high latitudes. Had these remains consisted simply of broken fragments and mere *débris*, their occurrence might be accounted for by the northerly action of the ocean ; but inasmuch as tropical fossil trees are found standing with their roots attached to the soil in which they once grew, surrounded with their fallen leaves and the remains of reptiles, Mr. Evan Hopkins contends that we are forced to the conclusion that *the lands themselves have moved bodily in that direction.*

By a computation founded on the earliest star-catalogue on record,—viz. that made by Hipparchus nearly 2,150 years ago—the places of reference have moved towards the north-west 30°, and have shifted northward during the same time 12° in latitude.[1] Mr. Hopkins observes:—

> The effect of this change, in the aspect of the heavens, is to make the southerly stars appear to recede southwards, and those situated in the north to approach, at the rate of 20″ per annum in the meridian. Hence it appears that the superficial film of our globe has been made free to move, like the ocean, from south to north, but in a spiral path; this movement has been determined to a fraction of a second of a degree, and is 7½ furlongs in longitude W. and 3 furlongs in latitude N. *per annum.*

Recent observations confirm this statement; e.g. In January 1853, the Royal Observatory at Greenwich was found to be 3° 2′ 5″ to the south of the transit of γ Ursæ Majoris; in the same month eleven years later it was found to be only 2° 58′ 24″ south of the same star. And although it may naturally be urged that such a small movement would not be sufficient to account for the geological changes referred to above, Mr. Evan Hopkins contends that it is quite sufficient to produce them, and also in the exact order in which they are seen.

In the deposits of the Isle of Portland there is still to be seen a petrified tropical forest; many of the fossil trees are still standing erect with the roots in the very ground in which they grew, and very similar in appearance to the palms now flourishing luxuriantly in Africa in latitude 15° south of England. Hence Dr. Hook remarked at the commencement of the eighteenth century that 'the fossils found in the Isle of Portland seemed to have been the productions of hotter countries; and it is necessary to suppose that *England once lay under the sea within the torrid zone.*'

Mr. Evan Hopkins computes that the southern part of England, according to the rate of change of 20″ per annum, must have possessed a tropical climate as recently as 5,500 years ago; in which he is supported by the great

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[1] We have a similar instance in England at Stonehenge in Wiltshire. It is known that the Druids erected their giant-stones in the form of an ellipse, in order to receive the sun's rays at the summer solstice; but it is upwards of 12° from that position at the present time.

authority of Cuvier, who assured the Rev. Walter Mitchell when in England, that 'all his researches had brought him to this conclusion, that the geological changes on the earth do not require a longer period for their accomplishment than 6,000 years.' He further points out that the theory which was propounded during the last century and adopted by D'Alembert, of accounting for the change by an assumed conical motion of the earth's axis, has been completely demolished by M. Poinset, an eminent member of the French Institute, observing:—

Astronomers will continue to be perplexed with the results of their observations until they have corrected their tables of refraction, and adopted *the now well-established* superficial *movement*, instead of the reeling or conical motion *of the terrestrial axis*, which has not a single physical fact to support it. The Astronomer Royal in his report for 1861 remarked that 'the transit circle and collimators still present those appearances of agreement between themselves, and of change with respect to the stars, which seem explicable only on one of two suppositions—that *the ground itself shifts with respect to the general Earth*; or that the axis of rotation changes its position.'—*Journal of the Transactions of the Victoria Institute*, vol. ii. p. 10.

But we must pass on to notice another objection against the veracity of Moses in his description of the 'Firmament' of Heaven, formerly urged by Voltaire, and now revived and adopted by Mr. Goodwin.

The latter observes in one part of *Essays and Reviews*:—

The Mosaic Cosmogony represents the sky as a *watery vault* in which the sun, moon, and stars are set. But the discordance of this description with facts does not appear to have been so palpable to the minds of the seventeenth century as it does to us.—P. 209.

In another part of the same essay he says:—

The work of the second day of creation is to erect the vault of Heaven, which is represented as supporting an ocean of water above it. The waters are said to be divided, so that some are below, some above the vault. That the Hebrews understood the sky, firmament, or heaven to be a permanent *solid vault*, as it appears to the ordinary observer, is evident enough from various expressions made use of concerning it. . . . No quibbling about the derivation of the word *rakia*, which is literally something beaten out, can affect the explicit description of the Mosaic writer, contained in the words 'the waters that are above the firmament,' or avail to show that he was aware that the sky is but transparent space.—P. 219.

Of these two contradictory opinions, that the Hebrews understood the sky to be either a '*watery*' vault or a

'*solid*' one, it is not quite clear which Mr. Goodwin means to imply, as they certainly could not believe both; but we may test the critic's assertions that the Hebrews considered heaven as a solid vault, or indeed as any vault at all, by referring to other passages of Scripture in order to discover what the Hebrews really understood by the words which Moses used.

Mr. Goodwin further observes:—

> It is pretended that the word *rakia* may be translated 'expanse,' so as merely to mean empty space. *The context sufficiently rebuts this.* —P. 220.

Let us consider whether this is so.

The Hebrew language has no word for 'air,' properly speaking. It occurs only once in A.V. at Job xli. 16, as the rendering of *ruach* 'spirit,' and in several places for 'the heavens,' *shemesh*. The nearest approach in Scripture to define what we mean by 'air,' is with words denoting *watery vapour*, whether floating around them or seen in the breathing of animals, and words for *smoke* arising from a burning substance, and for *air in motion* as wind or storms. But of elastic fluids the Jews did not seem to have any conception. The word used by Moses means, as Mr. Goodwin admits, an *expanse* or *something spread out*, and therefore incompatible with the idea of a vault or arch. Now it is seen that in Scripture this 'expanse' is the place in which the birds fly, as in *Genesis* i. 28, they are described as 'the fowl of the heavens' (not 'air' as in A.V.); a description quite inapplicable if the Jews considered the heavens a *permanent solid vault*, in which the heavenly bodies were fixed, as anyone might see at a glance that the idea of 'the fowl of the solid vault' would be simply nonsense. Moses' reason for describing the birds as he has done is because they fly in the heavens, as we read in *Deuteronomy* iv. 17, 'any winged fowl that flieth in the heavens' (air)—and in *Proverbs* xxx. 19—'the way of an eagle in the heavens'—and again in *Jeremiah* viii. 7—'the stork in the heaven knoweth her appointed time'—in all which places 'heaven' means the place where the birds fly and the winds blow, as in *Psalm* lxxviii. 26—'He causeth a wind to blow in the heaven.' Hence it is certain that the sacred writers considered the heavens or firmament

as something analogous to the air, an expanse or ether, and not a hard solid vault, as Mr. Goodwin appears to think. A similar idea of 'expanse' or something unsolid is to be inferred from the way in which other words signifying to *extend* or *spread out* are applied to the heavens, as e.g. 'My right hand hath *spread out* the heavens,' *Isaiah* xlviii. 13; or 'who stretchest out the heavens like a *curtain*,' *Psalm* civ. 2. The word here translated 'curtain' means *something tremulous*, as Gesenius gives it, 'a curtain hanging,' so called from its tremulous motion, a simile most unsuitable for a 'solid vault,' but most appropriate for an ethereal expanse or fluid. That the Jews of both ancient and modern times so understood the use of the word *rakia*, translated 'firmament,' appears perfectly clear from what has been already adduced; and should any of our readers wish to see it further confirmed, we cordially recommend to their notice the learned investigation which the late Dr. McCaul has made of this subject.

But it may be asked if the Jews understood the meaning of the term in this manner, how is it that the LXX. and Vulgate versions render *rakia* by στερέωμα and *firmamentum*? The answer is that these words imply, not something solid, but something which held firm the heavenly bodies in their places, as Milton uses our English word in the same way:—

> The *firmament*, expanse of liquid pure
> Transparent, elemental air, diffused
> In circuit to the uttermost convex
> Of this great round.—*Paradise Lost*, vii. 264, &c.

Having thus shown the meaning of *rakia* as understood by Jews and Christians alike, Mr. Goodwin's objection as signifying a 'solid vault supporting an ocean of water above it' dissolves into thin air, and is altogether incompatible with its true meaning of an ethereal expanse. But independent of this, the theory of 'an ocean of water' above the firmament is a fiction of the essayist's imagination. There is not a word about it in Scripture. The Mosaic Cosmogony teaches that the *firmament* was to divide the waters below it from the waters above it—in other words, to distinguish between the rain in the clouds from the springs of the earth or the waters of the

sea—but it does not say one word about the gathering together of the waters above the firmament into an ocean or reservoir; that is simply an invention on the part of those who delight in finding fault with Scripture. Indeed it is admitted by Gesenius, though unnoticed by Mr. Goodwin, that the Jews knew better than this, and were acquainted with the true origin of rain. It is, therefore, extremely incorrect to represent Moses, as the essayist does, to be no more than 'a Hebrew Descartes or Newton,' i.e. skilled in the scientific ideas of his own time.

But, argues Mr. Goodwin, since Scripture says that—

Heaven has *pillars*, Job xxvi. 11; *foundations*, 2 Samuel xxii. 8; *doors*, Psalm lxxviii. 23, and *windows*, Genesis vii. 11; the Hebrews understood the sky or firmament to be a permanent solid vault. With equal reason might we say that the Hebrews believed there were 'bottles in heaven,' Job xxxviii. 27, and that part of the water above the firmament was first 'bottled' off, previous to the earth being supplied with rain, or that 'the waters are bound up in a garment,' Proverbs xxx. 4; or that the ocean has 'bars and doors,' Job xxxviii. 10; or that the clouds are in danger of being torn or 'rent' by the weight of water 'bound upon' them, Job xxvi. 8. Surely if all these expressions are to be understood in a figurative sense, as it is evident they must be, the terms 'windows,' 'doors,' 'pillars,' and 'foundations' should be understood in a similar manner.[1]

The late Dr. McCaul has well observed on this subject, that—

When science knows a little more about the ethereal medium which fills space, and in which the heavenly bodies move, it may perhaps learn something more about 'this water and aqueous vapour' (alluding to Dr. Whewell's theory of the planets being 'spheres of water, and of aqueous vapour'), and be better able to understand the Mosaic statement about the waters above the firmament. But, however that may be, Biblical usage, Jewish tradition, the reason that moved the LXX. to adopt *stereoma* and the Vulgate *firmamentum*, the current of protestant interpretation until a recent date, concur in

[1] Although Mr. Goodwin's idea of the Jews believing the *firmament* to be 'a solid vault,' capable of supporting water, has no sanction from Scripture; it is somewhat remarkable that modern science has actually revived this notion. In the last Blue Book published under the auspices of the late lamented Admiral Fitzroy, he says:—Poisson, in his *Treatise on Heat*, assumed the excessive cold space has a condensing effect on air, causing it to become *viscous* (i.e. glutinous or frozen); and a very eminent mathematician (Sir John Lubbock) lately wrote to me, saying, that he inclined to a similar view, if not to his belief in its actual *congelation*!'

proving that 'the Hebrews' did not believe in a solid heaven like the brass or iron heaven of the heathen, but an expanse of something like the atmospheric air.

So when Bishop Colenso asserted that the Hebrew writers believed and taught that rain came from celestial reservoirs above a solid firmament through doors and windows, and attempted to support his assertion by references to the figurative language of the sacred poets, he exposed himself to the following severe rebuke from a layman, who appears to be as distinguished in the science of mathematics as the Bishop himself. Professor Young observes:—

Bishop Colenso's aspersions and perversions of the Divine record are as reprehensible as—what we cannot but call—the *cant* with which he interlards them is offensive. If he be not in his right mind, he is to be commiserated; if he be, he is to be contemned; not for his *free handling*, but for his *unfair* handling of the sacred Scriptures. The following are exemplifications sufficient as to what the Hebrews really considered to be the source of rain:—'The clouds dropped water,' Judges v. 4. 'They pour down rain according to the vapour thereof, which the clouds do drop,' Job xxxvi. 28; 'The clouds poured out water,' Psalm lxxv. 17. 'If the clouds be full of rain, they empty themselves upon the earth,' Ecclesiastes xi. 3. —*Modern Scepticism viewed in relation to Modern Science*, by T. P. Young, Professor of Mathematics in Belfast College, p. 202.

But what is to be understood by the word 'Day,' which so frequently occurs in the narrative of the Mosaic Cosmogony? We there read: 'And God called the light Day; and the darkness He called Night. And the Evening and the Morning were the first day,' verse 5; *lit.* 'there was evening and there was morning *one* day.' The cardinal number *one*, and not the ordinal *first*, as in our translation, denotes the peculiarity of that day—that it was one *sui generis*, as commentators have described it; *dies unicus, prorsus singularis*, says Mauer; *ein einziger Tag*, as De Witte calls it, or, according to Hitzig, *einzig in seiner Art*, 'the only one of its kind.' This appears sufficient at once to refute the old idea, that the word 'day' can mean nothing but a period of twenty-four hours; forgetful that our present understanding of the word 'day,' in the sense of the earth's revolution round the Sun, is inapplicable to the 'first' and two following days, as it was not until the 'fourth' day that God appointed the Sun to give light upon earth.

Further, it is to be noted that the word 'day' is evidently used with different meanings, in the verse itself. We read that 'God called the light,' i.e., the diurnal continuance of light, '*day*;' and also that the *evening* and the *morning* combined made *one day*. 'Day,' therefore, in the first of these clauses is used, not as a measure of time, but as a definition of light, i.e., the light as separated from the darkness, which we call the *natural day*; in the other it is the whole time occupied in the creation of light and its separation from the darkness, whether that was a *civil day* of twenty-four hours' duration, or some longer period. In other words, the daylight, to which God is represented as restricting the use of the term 'day,' is only a part of a day of creation, which included both light and darkness, and which might be either a civil day or a longer period, but could not be the natural day intervening between sunrise and sunset, which is the ordinary day of Scripture phraseology.

Again, the word 'day' is manifestly used in a less restricted sense than twenty-four hours, in the following chapter, as it is written, 'these are the generations,' or 'this is the history, of the heavens and the earth when they were created, in the day that Jehovah Elohim made the earth and the heavens,' proving that the word, in this instance, is meant to signify a period of undefined length, just as it is used to represent 'one year,' by Ezekiel iv. 6, or in 2 Peter iii. 8 as '1,000 years.' If, therefore, instead of accepting the word 'day' in the Mosaic record as restricted to a period of twenty-four hours, we take it in its figurative sense, as descriptive of a period or epoch, we are better able to understand the meaning of the text, as well as to see the harmony in this case between the word and the works of God. Thus we commonly use the term 'day' as applicable to any period during which a certain succession of phenomena takes place, as we speak of those familiar expressions 'the morning and evening of life,' as one of our poets writes—

> 'Tis the *sunset* of life gives me mystical lore,
> For coming events cast their shadows before.

It is also to be noted, that the expression 'evening and morning was,' which is used by Moses to denote the com-

pletion of *each* of the first six days, is omitted in respect to the *seventh*; from which we may reasonably infer that it has not reached its termination. The seventh day is therefore a current period of long duration—something more than a natural day of twenty-four hours; and hence the duration of the other six days should be extended likewise. As we reasonably conclude that there is uniformity in the use of the word 'day' when recording the 'six days'' creation, if we can discover the duration of one day, all the others must of necessity be the same. Now we read, that 'on the seventh day God ended His work which He had made; and He rested on the seventh day from all His work which He had made.' Ch. ii. 2. And again: 'In six days Jehovah made heaven and earth, the sea, and all that in them is, and rested the seventh day; wherefore Jehovah blessed the sabbath day, and hallowed it.' Exodus xx. 2. Whence it is argued, that our warrant for observing a weekly sabbath of twenty-four hours' duration depends upon God's rest from His work for a similar limited period. As Hugh Miller, in his *Footprints of the Creator*, observes:—

> I know not where we shall find grounds for the belief that that sabbath day, during which God rested, was merely commensurate in its duration with one of the sabbaths of short-lived man—a brief period measured by a single revolution of the earth on its axis. We have not a shadow of evidence that He resumed His work of creation on the morrow. The geologist finds no trace of post-Adamic creation; the theologian can tell us of none. God's sabbath of rest may still exist; *the work of Redemption may be the work of His sabbath day.*—P. 307.

Nor should we forget the testimony afforded by the traditions of different nations respecting the 'days' of creation representing a prolonged period. Thus, while the Indian Cosmogony supposes Brahma to have lain concealed within the mundane egg during a space of 360 days, it tells us that Brahma's days are not days of twenty-four hours, but that each one is equal to 12,000,000 years. The traditions of Persia represent the six creative days as meaning six successive 1,000 years, each of which answers, in character and scope, to a 'day' in the Mosaic Cosmogony. And thus the 'days' of creation were understood by ancient nations, knowing nothing of Geology or

scientific difficulties of any kind, to be but representative terms, really indicative of far longer periods. They could only have felt this from the principle of the representative character of all human terms, as applied to God, having been so familiar to their mode of thought as to require no explanation to make it apparent. And if so, we may fairly conclude that the 'days' of the Mosaic Cosmogony were so understood by those to whom the revelation of the Divine Will was originally made.

If we accept Hugh Miller's suggestion, that the work of Redemption may be the work of God's sabbath-day, it will serve to explain our Lord's words, 'My Father worketh hitherto, and I work,' St. John v. 17, as showing that when God rested from the work of *Creation*, He commenced the work of *Redemption*, by planning out a mode consistent with His justice, whereby man might be restored to that Divine Image in which he had been originally made, but had lost when Adam fell. Thus God's rest becomes a restoring process, a building up from the ruins of the fall, including both a Divine purpose and a Divine work in raising man to a higher level than that on which the material creation placed him. In this work both the Father and the Son are engaged—the work of the one being a reflex of that of the other—a work in which the profoundest rest is not excluded by the highest activity.

Is there any intimation given in Scripture of the duration of this *rest-day* of God? Let us consider. Biblical chronology, i.e., a computation from the Hebrew Scriptures, represents the creation of Adam to have taken place rather more than 4,000 years before the birth of Christ; and if a general impression, current for so many ages amongst Jews and Christians, as well as other heathen nations, be correct, that 6,000 years is the allotted time for man in his present condition on earth, previous to the predicted millennial age of 1,000 years, we gather, that the whole period will amount to the term of 7,000 years, at the expiration of which, as Scripture teaches, Christ's kingly rule over His 'possessions in the uttermost parts of the earth' will come to an end: see Psalm ii. 8 and Revelation xi. 15. As St. Paul expresses it, 'Then cometh the end (of this age), when He shall have delivered up the

kingdom to God, even the Father. . . . that God may be all in all.' (1 Cor. xv. 24, 8.)

We conclude, therefore, from such passages, that *then* the Father will resume His work, from which He will have been 'resting' for a period of 7,000 years; and if this be a correct surmise respecting the duration of *one day*, on the principle of analogy we understand the other six 'days' to be the same. Hence we infer, that nearly 50,000 years must have passed away since the beginning of the 'six days' creation,' when God began to adapt earth for the habitation of man, or, in the language of science, since the termination of the Tertiary Era.

But we know from the Mosaic record, that the earth did not exist in its present condition until the *third* of these creative 'days' or periods, as it is written, 'God called the dry land *Earth*; and the evening and the morning were the *third* day.'[1] Supposing, then, 7,000 years to be the duration of each of these periods, including that wherein God is now said to be resting, we must deduct two of these periods, i.e., 14,000 years, before the *Earth* appeared in its present condition, from the 49,000 years which is the sum total of the whole, and the result appears to be 35,000 years from that time until now.

Let us enquire how far Geology supports this hypothesis. I believe that the *sole* test by which the duration of the post-Tertiary era can be even surmised, is by estimating the age of the Falls of Niagara, which have been cutting through their rocky bed of Silurian strata without a moment's intermission, as age after age has rolled by, since they assumed their present magnificent appearance.

Other tests have been proposed, such as estimating the time required to form the coral reefs of the Pacific or the delta of rivers, as the Mississippi or the Nile, all of which necessarily fail, through the impossibility of making any correct estimate of the annual rate of such sub-aqueous deposits. But as regards the Niagara test, we find so high an authority as Sir Charles Lyell stating, in his *Principles*

[1] In the Mosaic record, the expression 'God saw that it was good' is wanting in the account of the second day's creation, but is twice repeated in that of the *third* day, which, as Jarchi suggests, may be on account of the work being incomplete on the *second*, and not finished until the earth was prepared for man on the 'day' following.

of Geology, that after the most careful enquiries which he was enabled to make on the spot in 1841, he came to the conclusion, that the average of *one foot* a year was the rate at which the waterfall has been cutting through its stony bed; adding, that 'it would have required 35,000 years for the retreat of the falls from the escarpment at Queenstown (a distance of seven miles) to their present site.' It must not, however, be forgotten, that as this is only a speculation on the part of Lyell, no proof as regards the length of the six creative 'days' can be drawn from it; especially as others, equally capable of judging, reduce the period considerably. Thus Mr. Bakewell puts it at 9,856 years; and Mr. Le Vaux, a Canadian geologist, reduces it still more. By taking proper measurements for several years, he has estimated that the yearly retrogression is at the rate of five feet in place of Lyell's average of 'one foot per annum,' the effect of which must be to reduce the period from 35,000 to 7,000 years.

Although this interpretation of the 'days' of creation may expose its advocates to the reproaches of the Essayists, as Mr. Goodwin declares it is—

> Painful and humiliating to see the harmonists (of Revelation and Science) attempting the impossible. They evidently do not breathe freely over their work, but shuffle and stumble over their difficulties in a piteous manner; nor are they themselves again until they return to the pure fields of Science.—*Essays and Reviews*, p. 250.

And Professor Jowett, in the same work, calls the harmony between Science and Faith—

> A spurious reconcilement; and speaks of the explanations of the first chapter of Genesis having slowly changed, and, as it were, retreated before the advance of Geology.—P. 341.

—I believe it is the only way by which we can obtain anything like a probable estimate of their length; and, so far from this hypothesis being a 'retreat before the advance of Geology,' or 'a spurious reconcilement' of the two records, it seeks support from the one, and is the only way of proving the harmony of the other.

Having thus considered the proper signification of the word 'Day' in the Mosaic Cosmogony, there remains to be noticed what the Hebrews understood by the term 'Earth' in the sacred narrative when prepared for the use of man. When it is conjoined with the word 'heaven,' it denotes

the entire globe; but it is evident that the practical understanding of the phrase would be in conformity with the ideas of the people who used it. Frequently it stands in Scripture for the 'land' of promise; or for any country mentioned in the connection; as the 'land' of Pharaoh, *Genesis* xlvii. 20, a part of 'the *land* of Egypt' in the same verse where another word is used. Sometimes it is put for any earthy matter; often figuratively, for mankind as the inhabitants of the world. The late Dr. Pye Smith considered, that in the Mosaic record the word is designed to express 'the part of our world which God was adapting for the dwelling of man, and the animals connected with him.' And he argued that as the Hebrews had not the most distant conception of the spheroidal figure of the earth, we may lawfully consider the Mosaic narrative as 'a description, in expressions adapted to the ideas and capacities of mankind in the earliest ages, of a series of operations by which the Being of Omnipotent wisdom and goodness adjusted and furnished the earth generally, but as the particular subject under consideration here, a portion of its surface for most glorious purposes'—viz. the occupation of creatures originally formed in the image and likeness of God.—Smith's *Geology*, p. 250.

Hence, as Sir Roderick Murchison has well observed:—

> Geology, in expounding the former condition of the globe, convinces us that every variation of its surface has been but a step towards the accomplishment of one great end; whilst all such revolutions are commemorated by monuments, which, revealing the proximate cause and object of each change, compel us to conclude that the earth can alone have been fashioned into a fit abode for man by the ordinances of Infinite Wisdom.—Murchison's *Silurian System*, i. 576.

This idea seems to be confirmed by the language of Scripture in reference to the Noachian Flood, wherein the destruction of the whole human race is set forth with unmistakable plainness, as well as every animal in that portion of the earth occupied by man, save those that were with Noah in the ark, as it is written, 'All flesh died that moved upon the earth—and every man—and Noah only remained alive, and they that were with him in the ark.' (*Genesis* vii. 21, 23.) Whereas the evidence from Geology against the whole of the globe having been submerged in water 4,000 years ago seems as conclusive as the case will admit. Nor let it be supposed that this is contrary to the Mosaic account of the Flood, where it is

said that 'all the high hills that *were* under the whole heaven were covered,' for many passages of a similar nature in Scripture show that such terms as 'all' and 'under the whole heaven' have frequently a restricted and limited sense; e.g., it is said of Nebuchadnezzar, that 'wheresoever the children of men dwelt, God had made him ruler over them *all*' (*Daniel* ii. 28), though we know at that time there were other flourishing kingdoms of the earth not under the rule of the king of Babylon. So St. Paul, writing to the *Colossians*, declared that in his time, i.e., the first century, the Gospel had been 'preached to *every creature* under heaven.' (Ch. i. 23.) From which we conclude, that the sacred narrative does not mean to assert a universal submergence of our globe in the time of Noah; and if so much of our earth was overflowed as was occupied by the human race, both the physical and moral ends of that tremendous judgment were fully answered. Hence, as Bishop Stillingfleet observes:—

> The flood was universal as to mankind; but from thence follows no necessity at all of asserting the universality of it as to the globe of the earth, unless it be sufficiently proved that the whole earth was peopled before the flood, which I despair of ever seeing proved.—*Origines Sacræ*, III. iv. § 3.

In summing up what has been already considered, we may point to these things in the Mosaic Cosmogony as showing the existing harmony between the teaching of Scripture and the discoveries of Modern Science in the following matters:—

1st. That the account of the earth, together with the heavens, having been originally created 'in the beginning' is amply sufficient to define the time for the most extensive requirements of Geology.

2nd. That the interval between the end of the Tertiary era and the time when God began to prepare earth for the use of man is clearly set forth in *Genesis* i. 2.

3rd. That the declaration of light having been created before the Sun was appointed to rule the day, and existing independently of sunlight, is in perfect accordance with the discoveries of modern science.

4th. That the term 'day' is not necessarily limited to twenty-four hours, but has a wider signification, and may mean a period of undefined length, or possibly of 7,000 years.

5th. That the term 'earth,' when separated from the word 'heaven,' as understood by the Hebrews, denoted that portion of it which was adapted expressly for the antediluvian inhabitants of the world; and to which the waters of the Flood were confined when 'all the high hills under the whole heaven' were covered.

We must never forget that the Scripture mode of expression was a condescension to the limited knowledge and the simple associations of comparatively uncultivated men. To infer, as Mr. Goodwin does, that Scripture teaches the immobility of the earth because it speaks of sun-rise and sun-set, though with strange contradiction he admits 'that the Scriptures wisely speak on natural things according to their *appearances* rather than their *physical realities*,' p. 235, is just as fair as it would be to attribute similar errors to our astronomical tables or to scientific men in their common talk. There are certain popular phrases which no spread of science or sarcasms of ill-informed critics will ever banish from general use. The great historian of the *Inductive Sciences*, like most people of reason, uses the following popular language:—

> The motions of the Sun, the succession of the places of his rising and setting at different times of the year, the greatest height which he reaches—would all exhibit several cycles. . . . The turning back of the Sun, when he had reached his greatest distance to the south or the north, as shown either by his rising or his height at noon, would perhaps be the most observable of such circumstances.—Vol. i. p. 127.

What would have been thought of Moses, if, instead of writing with the intelligent simplicity he does, as in *Genesis* xix. 23, 'the Sun was risen upon the earth when Lot entered Zoar,' he had adopted the jargon of the self-styled Biblical critics of modern times, and written 'Palestine had revolved when Lot entered the city until its tangent plane coincided once more with a radius vector from the Sun!'

The simplicity of Moses' writings is one chief testimony to their truth, if we compare them with the writings of heathen authors, as we shall endeavour to prove in the following chapter; and their accordance with the discoveries of modern Science is a conclusive proof that Moses, in the sacred Cosmogony, 'spake as he was moved by the Holy Ghost,' and directed by the finger of God.

HEATHEN COSMOGONIES.

CHAPTER III.

HAVING in the previous chapter discussed our *first* proposition, viz., That the Mosaic Cosmogony is proved to be true by the discoveries of modern Science, therefore its author must have written it by the direct inspiration of God,—we proceed to consider our *second* proposition, to this effect:—

That the Cosmogonies of heathen nations contain internal evidence exactly the reverse; and that such must therefore be accounted the vain invention of men.

In support of this proposition it will be sufficient to state the Cosmogonies as they appear in the traditions of various nations, and in the writings of those authors whose works have come down to us, by which we shall be enabled to judge how far they agree with the statements in Scripture or the conclusions of modern Science.

The first in point of time with regard to the writer relates the Cosmogony of the *Phœnicians*, which Sanconiatho,[1] who is supposed to have lived about four centuries after Moses, explains as follows:—

He says, that in the beginning of all things there was a dark and condensed wind, and a turbid Chaos as black as Erebus. In course of time this wind became enamoured of Chaos, and an intimate union took place which was called Pothos. From this union was generated *Môt*, which some call 'Mud,' but others, the putrefaction of a watery mixture. And from this sprung all the seed of the creation and the generation of the universe. And there were certain animals without sensation, from which intelligent animals were produced, and these

[1] Eusebius gives the following account of Sanconiatho from Porphyry, that 'he related in his history Jewish affairs with great veracity, and *agreed entirely with their history* in the names of places and men; having his accounts from "Jerubbaal, who is Gideon" (Judges vii. 1), and dedicated his work to Abibulus, king of Berytus.'—*Præp. Evang.* i. 6.

were called *Zophasemim*, i.e., 'the overseers of the heavens'—they were formed in the shape of an *egg*; and from Môt came forth the Sun and the Moon, the less and the greater stars. And when the air began to send forth light, by its fiery influence on the sea and earth, winds were produced and clouds and very great torrents of the heavenly waters. And when they were thus separated, and carried out of their proper places by the heat of the Sun, they all again met in the air, and were dashed against each other, thunder and lightnings being the result. At the sound of the thunder the before-mentioned animals were aroused, and startled by the noise, and moved upon the earth and in the sea, male and female. These things were found written in the Cosmogony of Thoth, and were drawn from his observations and the natural signs which by his penetration he perceived and discovered, and with which he has enlightened the world.—Eusebius, *Præp. Evang.* i. 10.

The *Chaldæan* Cosmogony is related by Berosus of Babylon, who lived in the fourth century B.C. His account is as follows:—

There was a time in which there existed nothing but darkness and an abyss of waters, wherein resided most hideous beings, the produce of a two-fold principle. There appeared men, some of whom had two wings, others four, and with two faces. They had one body, but two heads; one that of a man, the other that of a woman.[1] Human beings existed, some with legs and horns of goats, others with horses' hind-quarters, &c. There were creatures in which were combined the limbs of every species of animals, of all which were preserved delineations in the Temple of Belus at Babylon. The person who presided over them was a woman named *Omoroca*, which in the Chaldean tongue is *Thalath*; in Greek *Thalassa*, i.e., 'the sea;' but which might equally be interpreted 'the moon.' All things being in this situation, Belus came, and cut the woman asunder; and of one half of her he formed *the Earth*, and of the other half *the Heavens*. Thus Belus divided the darkness and separated the Heavens from the Earth, and reduced the universe to order. But the animals, not being able to bear the prevalence of light, died. Belus, upon this, seeing a vast space unoccupied, though by nature fruitful, commanded one of the gods to take off his head and to mix the blood with the earth, and from thence to form the existing race of mankind and animals.—Eusebius, *Chronicon*, v. 8.

Diodorus Siculus, a Greek historian of the first century B.C., thus describes the *Egyptian* Cosmogony:—

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[1] In the Royal Museum at Naples there are some sculptures of Grecian art, representing mankind as described in the text, showing how the theory of the Chaldeans was accepted by the learned Greeks. There are certain figures represented in the sculptures, each with two heads; one evidently that of a male, the other of a female. —*Raccolta de' Monum. del R. Mus. Borbonico.* Napoli, 1842.

The Egyptians suppose that at the original constitution of all things, heaven and earth possessed one uniform appearance, their respective natures being mixed up together. But after this the material substances separating from each other, the earth took the entire constitution which is now seen in it, and the air acquired a perpetual motion. Hence, on the one hand, the fiery part of the air ran into one mass in the higher regions of the atmosphere, its nature being such as would be borne upwards on account of its lightness; from which cause also both the sun and the remaining multitude of the stars became involved in the universal rotation; and on the other hand, the earth and dark miry part combining with the moist substances, sank down to the lowest situation in consequence of their weight. By the heat acting upon this earthy body, it first received consolidation; and subsequently fermentation taking place on the surface in consequence of the heat, some of the moist matter swelled up into bubbles in many places; and these moist spots became by means of the heat impregnated with animal life; receiving nutriment by night out of the mist which fell from the surrounding air, and made firm by the heat in the daytime. At last, these embryos having acquired their full growth, and the membranes which enveloped them having burst, all the various forms were produced. Those which had partaken of the greatest heat soared away to the higher regions, and became *birds*; those which retained the earthy constitution were reckoned the *occupants of earth*; those which had gotten the greater abundance of a moist nature ran together to the sea, and became fish.—*Diodor. Sicul.* lib. vii.

That the ancient *Egyptians*, in their ideas of Cosmogony, also held the 'mundane-egg' theory is evident from the inscriptions on the mummy cases belonging to the twelfth dynasty, about 2,000 B.C., and from the statement in their *Ritual* or *Book of the Dead*, where it is written:—

I am the Egg of the Great Cackler. I have watched this great egg which Seb prepared for the earth. I grow, it grows in turn. I live, it lives in turn. I breathe, it breathes in turn.—*Chapter* liv.

It is curious, likewise, to see how this 'egg' theory is found as a tradition amongst the aborigines at the Antipodes, who believe that the Earth was once a flat plain in a state of chaotic darkness, until a little bird named *Pupperimbul* carried off the egg of an emu, and ejected it into space. This egg, called *Gorwee*, became the sun, which has since given light to the world.—*Transactions of the Philosophical Institute of Victoria*, vol. ii.

The *Grecian* Cosmogony is found in the Orphic[1] fragments as follows:—

[1] It is disputed when Orpheus lived, or indeed, whether he is only a myth. Some suppose him to have lived in the era of the Argonauts,

Zeus is the First; Zeus the thunderer is the last.
Zeus is the head; Zeus is the middle, and by Zeus all things were made.
Zeus is male; Immortal Zeus is female.
Zeus is the foundation of the Earth, and of the starry heaven
Zeus is the breath of all things; Zeus is the rushing fire.
Zeus is the root of the Sea; he is the Sun and Moon.
Zeus is the king; he is the author of universal life;
One Power, One Dæmon, the mighty Prince of all things:
One kingly frame in which this universe revolves,
Fire and water, earth and ether, night and day,
And counsel the primeval Father, and all-delightful Love.
All these are united in the vast body of Zeus.
Would you behold his head and his fair face?
It is the resplendent heaven, round which his golden locks
Of glittering stars are beautifully exalted in the air.
On each side are the two golden taurine horns,
The risings and settings, the tracks of the celestial gods;
His eyes the Sun and the opposing Moon:
His truthful mind the royal incorruptible Ether.

Eusebius, *Præp. Evang.* lib. iii.

Another expression of the Grecian Cosmogony is found in the Pythagorean theory, according to the following statement of Timæus the Locrian:—

The causes of all things are two. *Intellect*, of those which are produced according to *Reason*; and *Necessity*, of those which necessarily exist according to the powers of bodies. Of these the first is of the nature of good, and is called God, the principle of such things as are most excellent. Before the heaven was made there existed in reality *Idea* and *Matter*, and God the demiurgus of the better nature; and since the nature of Continuance is more worthy than that of novelty, God in His goodness, seeing that Matter was continually receiving form and changing, undertook to reduce it to order. Therefore, He fabricated this world out of all the Matter, and constituted it the boundary of essential nature, comprising all things within itself, one, only, begotten, perfect, with a Soul and Intellect—for such is superior to one without Soul or Intellect. He gave it also a spherical body, for such of all other forms is the most perfect. Since, therefore, it was His pleasure to render His production most perfect, *He constituted it a god*, generated indeed, but indestructible by any other cause than by the God who made it, in case it should be His pleasure to dissolve it.—Cory's *Ancient Fragments*, p. 303.

The Cosmogony of the *Tyrrhenians*, or ancient Etrurians, was of this nature:—

God, the demiurgus of all things, was pleased to employ 12,000 years in their creation; and extended these years over twelve divisions,

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i.e. 13th century B.C., though Pherecydes Syrus says he had no share in that expedition.

called *houses*. In the first He created the heaven and the earth; in the second, the apparent firmament above; in the third, the sea and all the waters of earth; in the fourth, the great lights, the Sun and the Moon, together with the stars; in the fifth, every soul of birds, beast, and fish; and in the sixth, man. The first 6,000 years were consumed before the foundation of man; and during the other 6,000 years the human race will continue, so that the full time shall be completed to 12,000 years.—Suidas v. *Tyrrhenia*.

The *Hindoo* Cosmogony is represented in their Shasters on this wise:—

All the germs of the world which subsequently came into existence were condensed in the shape of an egg,[1] of which *Brahm* took possession in the form of *Brahma*. 1,000 *jugs*, which equal 300,000,000 years, elapsed before the egg was hatched. During that period it floated like a bubble upon the mighty deep. At length it broke, and *Brahma* sprang to light; having 1,000 heads, with an equal number of eyes and arms, to enable him to undertake the work of creation. Similarly with this incarnation, another monster appeared from the same egg, whose hairs were forest trees, his head the clouds, his beard the lightning, his breath the atmosphere, his voice the thunder, his eyes the sun and moon, his nails the rocks, and his bones the mountains of the earth. The egg being thus hatched, *Brahm*, as Creator, retired from the scene and relapsed into his former state of somnolent blessedness. The earth is represented as a flat plain of circular form, measuring 400,000,000 miles in circumference; and resting upon an enormous snake with 100 heads, which is itself supported by a gigantic tortoise. *Brahma* is said to die in course of time; and on his death all the worlds will suffer deluge; all the Audons will be broken up, and the Paradise of Vishnu will only remain. At that time Vishnu, taking a leaf of the tree called *Allemaron*, will place himself on the leaf under the figure of a very little child, and thus float on the sea of milk, sucking the toe of his right foot. He will remain in this posture until Brahma comes forth from his navel anew in a tamarind flower. It is thus that the ages and worlds succeed each other and are perpetually renewed.—Moor's *Hindoo Pantheon*, p. 100, &c.

Another explanation of Hindoo Cosmogony is given in the *Institutes of Menù*, to which Sir William Jones ascribes an antiquity of about 800 B.C., or 700 years after

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[1] This idea of the chaotic 'egg,' so common in the mythology of various other nations unblessed with a revelation from God, was happily ridiculed by Aristophanes, who introduces his 'Birds' singing, in a solemn hymn—'How sable-plumaged Night conceived in the boundless bosom of Erebus, and laid an *egg*, from which in the revolution of ages sprung Love, resplendent with golden pinions. Love fecundated the dark-winged chaos, and gave origin to the *race of birds*.'—Aristophanes' *Birds*, 694.

Moses, where the alternate destruction and renovation of the world is thus described:—

The Being whose powers are incomprehensible having created me (Menù) and this universe, again became absorbed in the supreme spirit, changing the time of energy for the hour of repose. When that power awakes, then has this world its full expansion; but when he slumbers with a tranquil spirit, then the whole system fades away. For while he reposes as it were, embodied spirits endowed with principles of action depart from their several acts, and the mind itself becomes inert.

Menù then describes the absorption of all beings into the Supreme Essence, and the Divine Soul itself is said to slumber, and to remain for a time immersed in 'the first idea or in darkness;' and proceeds:—

Thus that immutable power, by waking and reposing alternately, revivifies and destroys, in eternal succession, this whole assemblage of locomotive and immovable creatures.

After speaking of a long succession of *manwantaras*, or periods, each of the duration of many thousand ages, Menù affirms:—

There are creations also and destructions of worlds innumerable: the Being, supremely exalted, performs all this with as much ease as if in sport, again and again for the sake of conferring happiness.—*Institutes of Hindoo Law, or the Ordinances of Menù, from the Sanscrit,* chap. i.

If, however, we look to the ancient Vedas, we observe that the Hindoos must at one time have had better conceptions of the true nature of deity than the *Institutes of Menù* would lead us to suppose. Take, for example, one description of the Supreme Being under the title of 'Brahm,' as given in Coleman's *Hindoo Mythology*, and we seem almost to be listening to the words of Divine Wisdom:—

Perfect truth, perfect happiness, with equal, immortal, absolute unity, whom neither speech can describe nor mind comprehend; all-pervading, all-transcending, delighted with his own boundless intelligence, not limited to space or time; without feet, moving swiftly; without hands, grasping all worlds; without ears, understanding all; without cause, the first of all causes.

The *Burmese* Cosmogony is thus explained:—

They allege three causes of destruction of former worlds, viz., fire, rain, and wind, but rain is the sole cause of reproduction. After the destruction of a world, rain begins to fall like mustard seed, and increases by degrees till each drop becomes 1,000 *juyana* in size. This rain fills all the space which had formerly been occupied by the

destroyed inhabitants, and even greater; for by the wind it is gradually inflated to the precise bulk of the former world. The rain forms a crust, out of which arise first the inhabitants of the *Zian*, and then *Mienno* with the abodes of the *Nat* who dwell near that mountain. The rain continuing, our earth was gradually formed; and subsequently, 1,010,000 worlds, all of which are exactly in the same disposition, order, situation, and form, which they had in their previous existence. These changes of destruction and reproduction of worlds take place, not by the exercise of any creative power, but are occasioned by Fate. On the surface of the newly regenerated world a crust is formed, having the taste and smell of butter, from which the inhabitants of the earth are born.—Faber's *Origin of Pagan Idolatry*, vol. i. p. 127.

The *Chinese* Cosmogony resembles in some respects the Hindoo:—

The first man was *Puonen*, who was born of Chaos, as it were out of an egg. From the *shell* of this egg in the deep gloom of night were formed the heavens; and from the *white* of it was made the atmosphere; and from the *yolk* the earth. In point of order, the heavens were first created; next, the foundations of the earth were laid, then the atmosphere was diffused around the habitable globe, and last of all, man was called into existence.

Further light is thrown on the Cosmogony of the Chinese by some curious passages in their book *Y-king*, which is supposed to be of Confucius' age, B.C. 500. *Y-king* means 'the book of Y,' and received its name from the mystery of which it treats, and this mystery was hieroglyphically represented by a figure, resembling the Greek ξ or the Roman Y. This book teaches, that what they call 'the great Term' is the great *Unity* and the great *Y*; that *Y* has neither body nor figure; and that all which have body and figure were made by that which has neither body nor figure. It asserts also, that the great Term or unity comprehends '*Three*,' and describes this comprehension to be of such a nature that the one is three, and that the three are one. *Iao* is Life; the first has produced the second; the two have produced the third; and the three have made all things. He, whom the spirit perceiveth and whom the egg cannot see, is called *Y*. This character *Y* is explained by Hin-chin in the following words:—

At the first beginning, Reason subsisted in the Unity; that is it which made and divided the heaven and the earth, which changed and perfected all things.—*Mémoires chinois* apud Bryant, in *Phil. Jud.*, pp. 285–287.

The *Scandinavian* cosmogony was of a very different nature from that of the Chinese, and is related as follows :—

A breath of heat spreading itself over the gelid vapours, they melted into drops, and of these drops was formed a man named *Ymer*, and from him all the giants are descended. From the same drops was formed a cow named *Oedumla*, and from her there sprang a man endowed with beauty and power, called *Bure*; he was the father of *Bore*, who married *Beyla*, the daughter of the giant *Baldoru*. Of that marriage were born three sons, *Odin*, *Vile*, and *Ve*. These slew the giant Ymer, and dragging his body into the middle of the abyss, out of it formed *the Earth*. The water and the sea were composed of his blood; the mountains of his bones, the rocks of his teeth; and of his hollow bones, mingled with the blood that ran from his wounds, they made the vast ocean, in the midst of which they fixed the earth. Then having formed *the Heavens* of his skull, they made them rest on all sides upon the earth; and having divided them into four quarters, they placed a dwarf at each corner to sustain it. These dwarfs are called *North*, *South*, *East*, and *West*. After this, seizing upon fire in Muspelsheim, they formed the sun from it, and placed it in the sky to enlighten the earth. The earth is represented as surrounded by a deep sea, on the shores of which all the giants have their dwelling. But higher up, in a place equally distant on all sides from the sea, the gods, *i.e.*, the sons of Bore, built upon the earth a fortress against the giants, the circumference of which surrounds the world. The materials which they employed for this work were the eyebrows of Ymer; and they called the place *Midgar*, or the middle mansion. They afterwards tossed his brains into the air; and they became clouds.—Faber's *Origin of Pagan Idolatry*, vol. i. p. 215.

The tradition current amongst the *South American Indians* respecting the Creation of the Earth is as follows :—

In the beginning, when *Guatechu* reigned over Chaos, only six men existed, who dwelt upon the tops of the clouds, which allowed them to wander over the Universe. Being sad with the idea that their race was accursed and could not be perpetuated, they held a council to consider how such a dire misfortune might be prevented. While so engaged *Mayoba* suddenly appeared, and said to them in a voice that resembled the hoarse howling of a distant storm, 'What you are seeking exists: choose the bravest and handsomest among you; let him go to Paradise, where he will find *Ataentsee*, the woman who will prevent your race from perishing; and that is the reason why Guatechu keeps her from you, for he repents having made you.' After uttering these words Mayoba disappeared with a burst of savage laughter, which frightened the counsellors exceedingly. But subsequently they selected the handsomest and whitest amongst themselves named *Hoquoho*, to go and conquer Ataentsee. Hoquoho, aided by his five companions, proceeded to pile up the clouds on the top of one another, in order to scale Paradise; but in spite of all their efforts they were as

far from success as ever, until the birds took compassion on them, and forming themselves into a compact flock, they made a convenient seat for Hoquoho, whom they bore away on their wings. On reaching Paradise, Hoquoho concealed himself behind a tree opposite the wigwam in which Ataentsee appeared, in order to draw water at the spring, as she was accustomed to do every morning. Hoquoho saluted her, and offered her some grizzly bears' grease to eat, of which he had laid in a store. Ataentsee was surprised and charmed with the appearance of Hoquoho, and they speedily came to a complete understanding; but Guatechu, perceiving what had happened, and furious at finding his plans overthrown, expelled the two unhappy beings from Paradise, and hurled them into space. They continued falling for nine days and nights, imploring, but in vain, the mercy of Guatechu, who had stopped his ears with wax, and did not hear them. At length, a *tortoise* took pity on the wretched couple, and placed itself under their feet in order to stop their fall. Then the others, caymans (crocodiles) and sea-fish, went to the bottom of the water to fetch clay, which they brought up and fixed all round the shell of the tortoise; and thus they formed a small island, which gradually increased through their incessant labour, and ended by forming the EARTH, such as it exists in the present day.

This notion of a 'tortoise' forming the foundation of our earth, common also to the Hindoo Cosmogony, is similar to the *Latin* fable of Atlas carrying the world on his shoulders, of which the Roman poets so often sang:—

> Atlas' broad shoulders prop th' incumbent skies:
> Around his cloud-girt head the stars arise;
> His towering neck supports th' ethereal way,
> And o'er his brow black woods their gloom display.
> Hoar is his beard; winds round his temples roar,
> And from his jaws the rushing torrents pour.
>
> *Silius Italicus*, i. v. 202.

Comparing these different traditions of various nations respecting the creation of the world with the Mosaic Cosmogony as set forth in the Bible, we confidently leave it to any unbiassed mind to decide which harmonises best with the discoveries of modern science, and which bears the impress of being a revelation from the Spirit of God. And we are glad to find that on this subject we have the testimony of so 'acknowledged' an authority as Sir Charles Lyell that the cosmological notions of some of the *savans* of the present day harmonise less with the Mosaic record than with the strange ideas of cosmogonies entertained by those nations who were without a revelation from God, as he observes:—

One extraordinary fiction of the Egyptian mythology was the supposed intervention of a masculo-feminine principle, to which was assigned the development of the embryo world, somewhat in the way of incubation; for the doctrine was, that when the first chaotic mass had been produced in the form of an egg, by a self-dependent and eternal Being, it required the mysterious functions of this masculo-feminine demi-urgus to reduce the component elements into organised forms. Although it is scarcely possible to recall to mind this conceit without smiling, *it does not seem to differ essentially in principle from some cosmological notions of men of great genius and science in modern Europe.—Principles of Geology*, chap. ii. p. 12, 2nd edit.

In reviewing the subject we have been considering at some length, it is well to remember that all the greatest truths which it is necessary for man to know and believe have been taught him by Revelation, and not by Science. What the latter could never have discovered and can never controvert, the former has made known to the world—*e.g.*, science is utterly unable to account for the origin of the universe, or to go one step on firm ground beyond the simple revelation of Scripture. We have seen the strange notions of Cosmogony entertained by different nations, all of which have been proved utterly false both by the discoveries of modern science, and also by the arguments of common sense, which refuses to accept the theories that satisfied men of ancient times, who, though mighty in intellect, were then unblest with a revelation from God.

Whereas, on the other hand, a comparison of the Mosaic Cosmogony with the discoveries of modern science, if carried out by men with minds unclouded with scepticism and doubt, so far from shaking, tends to confirm our faith in the truth of the sacred record. We should be overcome with amazement, did we not know the source of his inspiration, at seeing how Moses has anticipated some of the remarkable discoveries of science in modern times; *e.g.*: if he relates how God created the heavens and the earth 'in the beginning'—*i.e.* at a period myriads of ages prior to its being inhabited by man—geology shows the existence of a long pre-human period; and astronomy proves by the discovery of the speed of light the same great truth, pointing to remote worlds, whose light has been flying onwards through space for thousands of years before reaching our earth. If the Mosaic Cosmogony represents the

existence of light as prior to and separate from the light which flows from the luminary that God appointed to 'rule the day,' modern science proves how true this is by the discovery of that fine subtle essence known as *ether*, which washes the remotest shores of the universe with its ocean of light. If the Divine Record represents the sun and moon as lamps or 'light-holders' astronomy shows that the sun itself is virtually non-luminous, and dependent for its light upon a luminous atmosphere in which it is enveloped.

Now where, it may be asked, could Moses have obtained such knowledge if he had not been aided by a revelation from on high? Faith has nothing to fear and everything to hope from the progress of Science; for we can gladly admit that both are beams of light from the same sun of eternal truth. So far as the records of nature have been studied and rightly interpreted, they have proved the most valuable and convincing of all commentaries on Holy Writ. The ages required for geological development, the infinity of worlds and the immensity of creation as revealed by the telescope, illustrate in a way which no other comment can do the Scripture doctrines of the eternity, the omnipotence and omniscience of God. Let Science, then, pursue her course 'unconcernedly,' as some would word it in the present day; for sure we are that the Scriptures present no bar to the most searching investigation on the part of those who seek to know the existing harmony between God's word and works, and who can say with proper feelings of humility, 'Lord, what is man that Thou art mindful of him, or the Son of man that Thou visitest him? . . . . Thou art worthy, O Lord, to receive glory and honour, and power; for Thou hast created all things, and for Thy pleasure they are and were created.' It has been well said by Dr. M'Cosh, in his *Method of Divine Government*:—

Science has a foundation, and so has Religion. Let them unite their foundations, and the basis will be broader, and they will be two compartments of one great fabric, reared to the glory of God. Let the one be the outer, and the other the inner court. In the one let all look and admire and adore; and in the other let those who have faith kneel and pray, and praise. Let the one be the sanctuary where human learning may present its richest incense as an offering to God, and the other, the holiest of all, separated from it by a veil

now rent in twain, and in which, on a blood-sprinkled mercy-seat, we may pour out the love of a reconciled heart, and hear the oracles of the living God.

What Religion chiefly has to fear is, not the most searching criticism of the contents of Scripture; nor any fundamental inquiry into the laws of physical phenomena; nor the fullest examination of every vestige upon the field of nature left by the footsteps of Time. Her true source of alarm is the danger to their faith which those persons must encounter who content themselves with superficial information or partial knowledge, or who belong to that class of critics who are described in Scripture as 'professing themselves wise, have become fools.' Those who seek in the Bible for positive information on matters pertaining to natural science will necessarily seek in vain. But for those, on the other hand, who, while they venture not to deliver physical doctrine as the teaching of Revelation, recognise its undoubted supremacy in its own province, Scripture will ever possess the peculiarity of meeting every want, and appeasing every difficulty. In its pages every longing of our nature, the most superficial as well as the most profound, will find a full supply. Here ample provision has been made for the tender susceptibility of the child, the mature intellect of manhood, and the consolation and solace of old age; and whatever shadow our present imperfect knowledge may throw upon its statements, the mourner will ever find comfort in the songs of Zion, and Philosophy still drink wisdom from the parables of the Son of God.

It may be that all the difficulties which the opponents of Christianity have stated have not yet been entirely removed; nevertheless the marvellous success with which most of them have already been met will convince every candid mind that such as remain are not insurmountable; and that here, if anywhere, it befits our ignorance to be thankful, and to wait. The supercilious philosophy which refuses Religion this scanty measure of justice must answer as it best may the demand of the Most High, 'Where wast thou when I laid the foundations of the earth, the heavens the work of my hands?' Let us not, however, be insensible to the good which has been derived from the adverse criticisms of the rationalistic school in the present

day. The thorough ventilation which the Scriptures have thereby received has been productive of the most beneficial results in confirming its entire truthfulness to all save those who are determinately blind. Like the alchymists of other days, they sought a phantom of their own imagining, and their efforts have not been rewarded by the prize for which they struggled; but the results which have met them on their progress are neither few nor unprofitable for other times. The buried treasure, it is true, was not found in their vineyard, but the toil expended in the search has been productive of a rich return.[1]

The Christian, on the other hand, fearlessly accepts the source of Divine knowledge which has been vouchsafed to him. In the pages of Scripture he recognises the record of imperishable truth; and as he shrinks from no inquiry, so he challenges all examination; thoroughly persuaded that the Christianity which is now and hereafter to flourish, and through its power in the inner circles of human thought to influence ultimately the masses of mankind, must be such as of old the wisdom of God was described:—

> For in her is an understanding spirit, holy, one only, manifold, subtil, lively, clear, undefiled, plain, not subject to hurt, loving the thing that is good, quick which cannot be hindered, ready to do good, kind to man, stedfast, sure, free from care, having all power, overseeing all things. . . . For this is the breath of the power of God, and a pure intelligence flowing from the glory of the Almighty. For she is the brightness of the everlasting light, the unspotted mirror of His power, and the image of the goodness of God.—*The Wisdom of Solomon* vii. 22—26.

The Christian's sole demand is justice in the conduct of this inquiry, and due qualifications on the part of those who enter on this examination. He knows that every assault which has marked the course of 1,900 years has but served to strengthen the bulwarks of his belief; and that above the chaos of human systems, and the wreck of rationalistic speculation, the light of inspiration shines more brightly than ever. For as Bacon declares:—

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[1] Victor Cousin, in his lectures on *The History of Moral Philosophy*, says:—'The first appearance of common sense on the stage of reason, was always in the character of scepticism,' but he showed the ultimate gain to philosophy in the end—so it will be with revealed religion.

The Scriptures being given by inspiration, and not by human reason, do differ from all other books in the author, which by consequence doth draw some difference to be used by the expositor; for the inditer of them did know four things whichno man attains to know, which are the mysteries of the kingdom of glory; the perfection of the laws of nature, the secrets of the heart of man, and the future succession of ages.

The Scriptures, then, must be recognised as the utterance of men of old, who 'spake as they were moved by the Holy Ghost,' before the inner illumination, the internal testimony of the Spirit can be called in confirmation of evidence produced before. To offer such as proof to the sceptic is utterly useless, for to him it is quite unintelligible—as much as if anyone were to attempt to discourse with a blind man on the variety of colours, or a deaf man on the power of sounds. But to the Christian who, with willing mind and humble acquiescence in all which is written therein, accepts the Scriptures as the word of the living God, the testimony of the Holy Spirit is indeed a treasure beyond all price stamped with the promise of our Divine Head. 'If any man will do His will, he shall know of the doctrine whether it be of God, or whether I speak of myself.' The Scriptures which breathe the vital principle of Christian life into the being of man through the operation of the Holy Ghost produce, as we study the inspired records, this recognition of His own former agency; and like the fable in the ancient story of the vocal statue on the plain of Thebes, the soul unconsciously makes symphony where the ray of light penetrates from. As Cudworth, the author of the *Intellectual System*, very beautifully observes—

The living law of the Gospel is as if the soul of music should incorporate itself with the instrument, and live in the strings, and make them of their own accord, without any touch or impulse from without, dance up and down, and warble out their harmonies.

History has recorded how earthly dynasties have passed away, while the kingdom of Christ has but enlarged its borders, and will continue so to do until all the kingdoms of the earth shall acknowledge His universal sway. Empires, once the glory of the world, have crumbled into dust, but the religion of the Cross shows no symptoms of decline. Under the banner of the Gospel will yet be

signalised the further triumphs of the Church of God. 'Heaven and earth shall pass away, but my words shall not pass away,' is the assurance of the Church's Divine Head. And though philosophers object, or critics cavil, or sceptics scorn, the Christian calmly abides the issue with confidence, strong as Faith and patient as Time. Like the bird which soars aloft and rejoices to contend with wild, adverse winds, or balances itself with outstretched wings on the bosom of the illimitable sky, even so Faith meets with unruffled calm all the difficulties which sceptics of every age have brought against the truth; while on the incomprehensible nature of Him 'in whom we live and move and have our being,' it reposes as on a fathomless deep or a boundless heaven; awed by that vastness which is without a limit, and resting secure on that centre which is without a bound. And hence the soul, thus filled with faith, and touched, like the compass-needle with the loadstone of love Divine—trembling with fear, yet ever looking up by fixed believing—pursues its course skywards and homewards until safely landed in the bosom of its God.

ANTHROPOLOGY.

CHAPTER IV.

The existence of the Anthropological Society at the present time is unquestionably 'a great fact.' It shows the interest taken by the learned concerning everything relating to that compound being, Man. Whether it be his origin, constitution, or antiquity; whether he has sprung from one pair or many; whether his ancestry is to be traced to fish, flesh, or fowl, or to the 'one primordial form,' the embryo of all vegetable and animal life alike; how he first obtained the art of speech; whether he has been a denizen of the earth 6,000 or 6,000,000 years; these and other cognate matters seem to be the chief points of discussion which are being ventilated with surprising confidence in the present day. It is proper to term it 'surprising,' because the tendency of intellectual activity in this age of progress is to reject or to ignore the only record which can speak authoritatively on such a subject.

Moreover, the differences between these philosophers is very striking; for while one is denying the unity of the human race, and demanding a dozen centres to start from, another asserts the unity of every living thing from mites to mammoths. All the old faiths in man's creation, duty and destiny with God's special works in calling forth distinct orders 'each after their own kind,' are repudiated by those who substitute the fancies of their imagination for the statements of the Divine word. Accordingly we are asked to believe that worms, fish, oysters, tadpoles, barnacles, bears, whales, and mankind, with all their collaterals—creatures that live outside their bones, and those that sit within them—are all derived from one original microscopic egg, and are only branches of the same stock,

the family likeness appearing more prominent between men and apes.

Man being by nature averse to believe in God, or to take Him at His word, is of necessity unable to comprehend the priceless treasure which he has in that Book of Books; which by the mysteries it contains alike exercises the wise and nurses the simple-minded; and which may be likened to a majestic river, in some places shallow, in others deep; wherein, to use the fine metaphor of Gregory 'the Great,' the lamb may find a footing and the elephant float at large.

Hence we find an extraordinary amount of disagreement amongst those who ignore the authority of the only Book which can throw light upon the subject. We learn from Scripture, that about 6,000 years have passed since the creation of Adam; the human race is expressly declared to have sprung from a single pair, whom the Creator formed from the dust of the earth, in His own image and after His own likeness; endowing him at the same time with the gift of speech, by which he was enabled at once to name every beast of the field and every fowl of the air, as it is said, 'Whatsoever Adam called every living creature, that was the name thereof.' The inhabitants of the antediluvian world are represented as having been entirely destroyed in the time of Noah with the exception of eight souls; and language is declared to have been uniform until the dispersion of the post-diluvians after their vain attempt to build the Tower of Babel.

Such is the simple statement of Scripture respecting the human race, but which so many in the present day are seeking to overthrow. Be it ours to consider as impartially as we can what the learned world are now teaching, respecting all that may be included under the general term of Anthropology. And the first branch of our subject relates to what may be called 'The Constitution of Man.'

Man's constitution, so different from that of the brute creation, is of such a nature that he can live under the scorching sun of Africa, as well as in the frost-bound regions of Spitzbergen. Cold and heat, drought and moisture, and every atmospheric variety are alike to him. The strength and flexibility of his frame is such that he

thrives everywhere, and climate has less influence in the production of varieties in his species than in any other. The tendency to variation from diversity of abode is much more conspicuous in the inferior animal creation. This is a characteristic mark of specific distinction too remarkable to be passed over in considering the constitution of man.

The Greenlanders and Esquimaux are found living as high as 80° North latitude, and prosecuting their usual employments of the chase in a temperature where mercury freezes into a solid mass at 39° below zero, and where even brandy congeals to ice in apartments containing fires; while the negro feels perfectly at ease in a climate where the thermometer in the shade ranges from 90° to 100°. Humboldt saw it at 115° in the immense Llanos near the river Oroonoco, while Buffon mentions an instance of its having once within his knowledge reached the still greater height of 117½°.

Thus we know that man can sustain all the degrees of heat and cold felt in this planet. Nor is his capacity less for supporting the varieties of atmospheric pressure. We reckon that at the level of the sea, the average pressure of the atmosphere is 32,325 lbs. upon the whole surface of the body, calculated by the barometer at 30 inches. On ascending to a height of 12,000 feet, the barometer stands at 20¼ inches, and the pressure is reduced to 21,750 lbs. The highest inhabited spot on the surface of the globe is the hamlet of Antisana, 13,500 feet above the level of the sea. Condamine and Bougier lived for three weeks, with their attendants, at a place over 15,000 feet above the sea level, when the barometer stood at 15 inches, and the pressure was only 16,920 lbs.

This capacity of subsisting and increasing in every latitude, so peculiar to the natural history of man, seems partly attributable to his physical constitution, and partly to his mental powers, and presents a striking contrast to the habits and customs of the lower animals. As Dr. Moore, in his work *The First Man and His Place in Creation*, observes:—

> Wherever there is life man lives. While other living beings are, by the necessities of their constitution, limited in their range, man ranges everywhere. Of the 200 species of monkeys, for instance—and

we quote them as nearest to man in bodily structure—scarcely any live naturally beyond the tropics. Moreover, the different species of monkey never mingle, but man multiplies in all climes; and there is no variety of the human race so far constitutionally at variance as to be debarred, as far as we know, from fruitfully commingling with any other so as to produce a new variety.

It is possible that the knowledge of this fact may have suggested the idea of what man really is in his moral nature as propounded by some of our modern *savans*. Passing by Plato's definition of man, 'a biped without feathers,' which was so ridiculed by Diogenes, when, plucking the feathers from a cock, he termed it, 'Plato's man,' which again has been defined by Carlyle in his *Sartor Resartus* by the questions: 'To the eye of vulgar logic what is man? An omnivorous biped that wears clothes. To the eye of pure reason what is he? A soul, a spirit, a Divine apparition.'—We turn to the theory advanced by Professor Oken of Zurich on this subject, which in his *Philosophy* he thus explains:—

The highest mathematical idea, or the fundamental principle of all mathematics, is the zero = 0. Zero is in itself nothing. Mathematics is based upon nothing, and consequently arises out of nothing. The Eternal is the nothing of nature. There is no other science than that which treats of nothing. *There exists nothing but nothing*;[1] nothing but the Eternal. Man is God wholly manifested. God has become man. Zero has become +. For God to become real, He must appear under the form of the sphere. God is a rotating globe. The world is God rotating. Everything that is, is material. Now, however, there is nothing that is not; consequently there is everywhere nothing immaterial. Fire is the totality of ether; is God manifest in his totality? God only is monocentral. The world is the bicentral God; God the monocentral world, which is the same with the monas and dyas. Self-consciousness is a living ellipse.

Although Oken himself tells us that the work from which the above is taken was written 'in a kind of inspiration,' it almost seems to require another inspiration to understand his meaning. We are inclined to think that it resembles very closely the pantheistic philosophy of Schelling and Hegel. As the former asserted the

[1] Oken's idea of 'nothing existing but nothing' appears to be derived from a theory of the Buddhists, who teach, 'Man's mind is divine, but most divine when nearest nothing.'—Hardy's *Eastern Monochism*. It has also been summed up in Horace Smith's witty line—

Where nought is everything, and everything is nought!

identity of God and nature, the latter regarded God as the absolute idea, ever developing itself in the world, and manifesting itself in the human mind. This was a revival of the notion which identified the creature with the Creator. According to this theory God is nature, and nature is God: God is the universe, and the universe is God. It appears to be identical with the doctrine of the Soofees, an order of Mahomedan Dervishes, whose Pantheism is shown in the exclamation of *Mevlânâ Zelâleddeen* to his spiritual master, 'O my master! you have completed my doctrine by teaching me that *you are God*, and that *all things are God*.' Or as they express their doctrine generally, 'I am the truth! There is no other God than me!'—*The Dervishes; or, Oriental Spiritualism*, by John Brown, p. 9.

The Hindoo idea of God and man is not dissimilar to this, as a Fakeer once addressed a Christian Missionary at Benares in the following way:—

'I worship God the eternal, the infinite, the Omniscient, Omnipotent, Omnipresent, the holy, just and righteous, the Creator of heaven and earth, the Supreme Ruler of all things: He it is I worship.' Rejoicing at such a sublime definition of Deity, the missionary asked, 'And who is that adorable Being whom you worship?' To which the Fakeer, pointing to himself, replied, 'I am He: He that speaks in me; *I am that Being*; I am part of Him; I am He.'—*Recollections of an Indian Missionary*, by the Rev. C. B. Leüpolt, p. 25.

If we compare the above idea respecting God and man with the theory of a noted American, we see the harmony between the philosophy of the East and West. Emerson says:—

The Christian teacher saw that God incarnates Himself in man, and evermore goes forth anew to take possession of the world. He said in this Jubilee of sublime emotion, 'I am Divine; through me God acts; through me, speaks. *Would you see God, see me*; or see thee, when thou also thinkest, as I now think.'—Emerson's *Essays*, p. 511.

Or hear the misanthropic views which a prominent sceptic of the past age takes respecting the constitution of man:—

In man, said Voltaire, there is more wretchedness than in all other animals put together. He loves life, and yet he knows that he must die. If he enjoys a transient good, he suffers various evils, and is at last devoured by worms. This knowledge is his fatal prerogative:

other animals have it not. He spends the transient moments of his existence in diffusing the miseries which he suffers; in cutting the throats of his fellow-creatures for pay; in cheating and being cheated; in robbing and being robbed; in serving that he may command, and in repenting of all he does. The bulk of mankind are nothing more than a crowd of wretches equally criminal and unfortunate; and the globe contains carcases rather than men. I tremble at the review of this dreadful picture, to find that it contains a complaint against Providence itself, and *I wish I had never been born.*

Painful and horrible as this view is of man alienated from God, what a contrast does it not present to the calm expression of the saints when dying concerning the hope that is in him :—

I shall shortly, exclaimed Hallyburton on his death-bed, get a very different sight of God from what I have ever had, and shall be meet to praise Him for ever and ever. What a wonder that I enjoy such composure under all my bodily pains, and in the view of death itself! What a mercy that having the use of my reason, I can declare His goodness to my soul! I bless His name; I have found Him, and die rejoicing in Him. *Blessed be God that ever I was born.—Man,* by the Rev. H. Green, p. 207.

What a contrast do these two utterances present to one another! The Scriptures tell us something concerning God and man which no natural science and no human investigation can ever reach. They declare, what science never could discover, the cause of death, and the only way by which its penalty may be avoided. They afford comfort and instruction to the humble-minded theologian such as John Wesley, when he exclaimed :—

I am the creature of a day, passing through life as an arrow through the air. I am a spirit come from God and returning to God, just hovering over the great gulf, till a few moments hence I am no more seen! I want to know one thing—the way to heaven, and how to land safe on that happy shore.

And they present a striking contrast to the boasting philosophy of the present age, as we find one of its prominent leaders in the person of Professor Huxley declaring that—

The question of questions for mankind, the problem which underlies all others, and is more deeply interesting than any other, is the ascertainment of the place which man occupies in nature, and of his relation to the universe of things. Whence our race has come; what are the limits of our power over nature, and of nature's power over us; to what goal we are tending: are the problems which present themselves anew, and with undiminished interest, to every man born in the world.

ANTIQUITY OF MAN.

CHAPTER V.

It has been remarked in the previous chapter that Scripture[1] represents man as having existed 6,000 years, and the human race as having sprung from the family of Noah after the Flood, which took place 4,300 years ago. In consequence, the only *proof* of man's existence on earth must be looked for as subsequent to that event; and this is to be found in the great Pyramid of Ghezeh, the date of which has been fixed by astronomical science to the year B.C. 2170, and accords with the statement of *Champollion le Jeune*, who wrote in allusion to those who had perverted the evidence which Egypt affords respecting the antiquity of man :—

> They will find in this work an absolute reply to their calumnies, since I have demonstrated that no Egyptian monument is really older than the year B.C. 2200.

I think Mariette's discoveries in Egypt of some tombs and statues belonging to the first three of Manetho's Dynasties may be placed fully a century earlier than Champollion (who wrote before these discoveries were made) is disposed to allow, but with these exceptions, which as regards any prolonged antiquity of man on earth are not worth considering, I would repeat what I have said above, and am glad to have my opinion confirmed by the ablest of our living Egyptologers, that the Great Pyramid is the first and most important *proof* of man's

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[1] By the term 'Scripture' chronology, I mean that of the Hebrew, and not the LXX., which would give man an antiquity of about 1,500 years more. The question between the two is much too long and too complicated to be considered here, but I will content myself with saying that I think, after a prolonged investigation of both, the Hebrew is the most correct.

existence on earth; and so far agrees with what Scripture teaches concerning the time of the Flood, and the scattering of mankind and the foundation of the primitive kingdoms of the earth.

Irrespective, however, of Scripture, the arguments in favour of the comparative recency of the human race may be summed up as follows:—

1. The actual number of the present population of the world would, according to the calculated rate of increase from the three sons of Noah on their exit from the ark be reached in about 4,400 years.

2. The comparatively modern date of art, sciences, and inventions.

3. The low date of all *authentic* history, whether Egyptian, Babylonian, Assyrian, Indian, or Chinese, none of which can be traced earlier than B.C. 2300.

4. The moral reasoning which forbids the supposition of so vast a period of gloom and barbarism as the opposite theory demands.

But it may be asked, What does the 'opposite theory' mean? If we refer to what the objectors say in contradiction to the Divine record, we shall be startled by the enormous diversity of opinion respecting the antiquity of man amongst those who have indulged their imagination at the expense of their reason in speculating upon this subject. One of the earliest of these modern objectors was the late Professor Rask, of Denmark, who lived during the last century, and who contents himself with declaring:—

That Adam, who in his twenty-eighth year had his third son Seth, and died in his seventy-eighth year, was the *first* man created by God, is a proposition which must fall to the ground both upon historical and philosophical investigations. Just because we know all about him and his children, he cannot have been the first; for many generations must have passed away, and the name of the first man—if he had a name—been buried in oblivion, long before our species could have arrived so far in experience of the phenomena of nature and the contemplation of man, as to have a language containing words to denote the parts of time, their curiosity sufficiently excited to observe its flight, and the desire of transmitting to posterity the observations they had made. What length of time, then, must have elapsed between the first man and Adam, of the year of whose birth and death, of whose wife and children, we have accounts? Then we have other nations whose traditions go as far, or even farther back in time,

without any mention of Adam, and which, historically speaking, have equal claims to authenticity and credit with the Hebrew.—Rask's *Tractate on the Longevity to be ascribed to the Patriarchs*, &c., p. 37.

Professor Rask's mode of computing the age of Adam is certainly ingenious. He supposes that the earliest mode of reckoning time was by *months* instead of solar revolutions or years; afterwards two months were used, and lastly four months; by which means the longevity ascribed to the Patriarchs is scientifically accounted for. Thus the age of the ante-diluvians should be divided by twelve; that of the post-diluvians by six to Serug; and those of Nahor and his successors by three, until in due course of time a year came to mean twelve months! Moreover Rask has been followed in his chronological theory by M. Lesueur, who computes the birth of 'Adam Patriarch of the Hebrews' 2,618 years *after* Menes (the Mizraim of Scripture) the grandson of Noah!—*Chronologie des rois d'Égypte*, p. 316.

By a different train of reasoning the late Baron Bunsen argued that Egypt was a formed kingdom as early as B.C. 10,000; and that 'man existed on earth about 20,000 B.C., and that there is *no valid reason* for assuming a more remote beginning of our race.'—*Egypt's Place in Universal History*, iii. xxviii. Lesley, Secretary of the American Philosophical Society, who adopts the same line of argument, which we shall presently consider, affirms on the other hand that 'our race has been upon the earth *for hundreds of thousands of years*.'—*Man's Origin and Destiny sketched from the Platform of the Sciences*, p. 66. Mr. Jukes, a distinguished English geologist, places the age of man at 100,000 years. Professor Fühlroth of Germany affirms in his work *Der fossile Mensch aus dem Neanderthal* that 'it reaches back to a period of from 200,000 to 300,000 years.' While Dr. Hunt, the President of the Anthropological Society, not content with the comparatively modest chronology of the Brahmins, which allows the human race an antiquity of 4,300,000 years according to Sir William Jones, contends that man has really existed on earth for the prolonged period of 9,000,000 years! And Professor Huxley, though cautiously avoiding to commit himself by naming a definite number

of years, having affirmed in his lecture *On the Fossil Remains of Man* that the human race was existing 'when a tropical fauna and flora flourished in our northern clime,' *i.e.* during the carboniferous era, we may fairly credit his theory concerning the antiquity of man with 90,000,000 of years if it so please him, a speculation which is not a whit more improbable than that of his brother anthropologist who is content with the more modest computation of 9,000,000.

There is, however, great looseness in the mode of estimating the antiquity of man, which is not creditable to these scientific speculators. Thus Mr. Wallace, in replying to an objection raised in the *Anthropological Society* concerning the *crania* of ancient races being the same as those of the modern, quietly says:—

> Perhaps a million, or *even ten millions* of years were necessary to bridge over the difference between the crania of the lower animals and man!

And so Professor Huxley, in his speech to the Prehistoric Congress at the Norwich Meeting of the British Association, asked if the distribution of the different types of skulls, which he divided into four, viz. the Australoid, the Negroid, the Mongoloid, and the Xanthrocoid, did not—

> Point to a *vastly remote time,* when these distant localities, between which there now rolls a vast ocean, were parts of one tropical continent? And if so, does it not throw back *the appearance of man upon the globe to an era immeasurably more remote than has ever yet been assigned to it by the boldest speculators*?

As it is scarcely necessary to spend our time in considering these admitted speculations respecting the antiquity of man, we turn to consider the only hypothesis which attempts to offer us anything like the nature of a reason, or, if we may so say without offence, is worthy of any examination whatever. Bunsen's theory that 'man existed about 20,000 B.C.,' while denying 'any valid reason' for a higher antiquity, was grounded upon certain diggings in the alluvial deposits of the Nile promoted by the late Mr. Horner,[1] in which pottery was discovered at a certain

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[1] Sir Charles Lyell, in his *Geological Evidences of the Antiquity of Man,* admits that 'the experiments instituted by Mr. Horner in the

depth. Estimating the mud-deposits at the rate of three and a half inches in a century, and calculating that it must have taken so many years for the pottery to reach the depth at which it was found, Bunsen pronounced accordingly. Now in reply to this we may observe that the basis of this calculation was anything but sure ground, for the French *savans* who accompanied Buonaparte's army to Egypt estimated, on evidence equally good, that the rate of deposit was *more than five inches* in a century in place of three and a half. This alone would have been sufficient to have thrown doubt on Bunsen's conclusions; but a far more conclusive proof of its weakness soon came to light, by the unexpected discovery, in the deepest boring at the foot of the statue of Rameses II., of the Grecian honeysuckle stamped upon some of these supposed pre-Adamite fragments, which showed that the said pottery belonged to the age of Alexander the Great at the earliest, and possibly more recent still. And if any further proof were needed, it is to be found in the fact that the late Sir Robert Stephenson, when engineering in the neighbourhood of Damietta, discovered in the alluvial deposits of the Nile, at a greater depth than was ever reached by Mr. Horner's diggings, *a brick bearing upon it the stamp of Mahomed Ali!* London *Quarterly Review*, No. li. p. 240.

In the year 1831 some workmen found, ten feet below the bed of the river Dove, in Derbyshire, a mass of ferruginous iron conglomerate. Now had there been, discovered in that mass any portion of human remains, the geologist might naturally have adduced it as proof of man's existence many thousands of years prior to man's creation according to the chronology of Scripture; but some coins of Edward I. which were subsequently found embedded in the mass showed that it could not be older than about six centuries ago.

Similarly when the signs of the zodiac were first discovered on the ceiling of the temple at Dendara in Upper

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hope of obtaining an accurate chronometric scale for testing the age of a given thickness of Nile sediment, are not considered by experienced Egyptologists to have been satisfactory.' The *Anthropological Review* pronounces Mr. Horner's evidence 'preposterous,' and laments that Sir Charles Lyell 'should have thought it worth while to notice *such absurdities*.'

Egypt, M. Dupuy and others contended that its construction must be referred to the epoch of the solsticial period, *i.e.* about 13,000 B.C., which would appear to agree with Bunsen's hasty conclusion respecting the age of the Nile mud, until the hypothesis was completely overthrown by Champollion's discovery in the midst of the astronomical ceiling of the names of Augustus, Tiberius, Claudius, *Nero, and Domitian*, with proofs that under the two last-named emperors the chief part of the sculptures at Dendara were made.

It may be safely affirmed that no argument concerning the age of man can be drawn from finding manufactures at any depth below the surface of the soil, on account of the impossibility of estimating the rate of sinkage; as a writer in the *Athenæum*, No. 1,509, under the signature of 'An Old Indigo Planter,' gives his personal experience of this in the following words:—

> Having lived many years on the banks of the Ganges, I have seen the stream encroach on a village, undermining the bank where it stood, and deposit, as a natural result, bricks, pottery, &c., in the bottom of the stream. On one occasion I am certain that the depth of the stream where the bank was breaking was *above forty feet*: yet *in three years* the current of the river drifted so much, that a fresh deposit of soil took place over the *débris* of the village, and the earth was raised to a level with the old bank. Now had our traveller then obtained a bit of pottery from where it had lain *for only three years*, could he reasonably draw the inference that it had been made 13,000 years before?

When, moreover, it is estimated that the Ganges carries 700,000 cubic feet of the clayey mud every hour into the Bay of Bengal, and some of the great Chinese rivers upwards of three times as much in the same amount of time,[1] it is surely most unscientific of Bunsen and others to estimate the antiquity of man from manufactured articles having been found at certain depths in the alluvial deposits of great rivers formed by such means.

Further, we must suppose that the speculations, such as those of Professor Rask, respecting a pre-Adamic race, may have been plagiarised from the Mohammedans, as they in their turn took the idea from the Egyptians. The *Sheik Muhee ed Deen el'Arabee* relates that once when he was absorbed in mental reflections near the holy

[1] Page's *Advanced Text-Book of Geology*, p. 31.

Caaba, he was accosted by a supernatural being, who assured him in reply to the question, of what kind of being he was? that he belonged to the tribe of MAN. 'I next asked him how long it was since he left the world? He replied, "It is now more than 40,000 years." Surprised, I added, "You say it is so long, whilst it is only 6,000 years since Adam's time, and yet you state that you are of mankind." He answered, "The Adam you speak of was the father of the human race, and though since his time only 6,000 years have elapsed, *thirty other worlds preceded him.*"'[1]

The Egyptian theory of the same nature is stated by Diodorus in the following passage:—

With regard to the first production of men, two opinions have been proposed by the most distinguished inquirers into nature and history. One party, assuming *the world to be without beginning* and to be incapable of destruction, maintain that *the human race has existed from eternity*, having never had a commencement of child-bearing. The other party, supposing the world to have had a beginning and to be destructible, affirm that mankind, like the other parts of the universe, had a first production, in fixed periods of time.—Diod. Sic. *Hist. Libr.* i. vii.

The chief point, however, on which some rely for proving the great antiquity of the human race is the discovery of certain flint implements, such as those found at Hoxne near Diss in Suffolk, at the beginning of the present century, and later in the caves of Gower in Glamorganshire, in a cavern near Wells in Somersetshire, and at various other places in England, as well as in some ancient alluvium at Abbeville in Picardy, where a large collection of similar flint weapons were found by M. Boucher de Perthes about A.D. 1840. As these flints are generally intermingled with the bones of extinct animals, it is contended that they afford proof of man on earth ages before the chronology of Scripture allows.

It should, however, be remembered that in none of these instances are the flint implements accompanied by relics of the men who are supposed to have manufactured them; but even should this prove to be the case, they afford but a weak basis on which to rest the startling theory of Professor Rask, that the world was extensively

[1] Brown's *Oriental Spiritualism*, p. 303.

peopled before Adam. For the opinion of those most competent to judge is decidedly adverse to such a conclusion. Thus M. Desnoyers, a distinguished geologist as well as archæologist, observes:—

The flint hatchets and arrow-heads of many French and English caves agree precisely with those found in the tumuli, and under the *dolmens*[1] (rude altars of unhewn stone) of the primitive inhabitants of Gaul, Britain, and Germany. The human bones in the caves associated with such fabricated objects must belong, not to antediluvian periods, but to a people in the same stage of civilization as those who constructed the tumuli and altars.

Sir Charles Lyell agrees with this conclusion, as he says:—

After weighing the arguments of M. Desnoyers, and the writings of Dr. Buckland, and visiting several caves in Germany, I came to the opinion that the human bones mixed with those of extinct animals in different parts of Europe were probably *not coeval.* . . . Most of the materials, organic and inorganic, now filling the caverns near Liége in Belgium, have been washed into them through narrow vertical or oblique fissures, the upper extremities of which are subsequently choked with soil and gravel.—*Geological Evidence of the Antiquity of Man,* pp. 62, 70.

And the same high authority, speaking of the human bone accompanying relics of the mastodon found at Natchez on the Mississippi, makes this candid admission:—

After visiting the spot in 1846, I described the geological position of the bones, and discussed their probable age with a stronger bias, I must confess, as to the antecedent improbability of the contemporaneous entombment of man and the mastodons, than any geologist would now be justified in entertaining.—*Ibid.* p. 200.

I have thought it allowable to term the flint relics found in these caverns 'implements,'[2] but it by no means

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[1] 'Dolmens,' sometimes termed *cromlechs* in this country by mistake, as the word is derived from *crum* 'curved,' and *lech* 'stone,' and is inapplicable to a square stone altar, which a *dolmen,* derived from *daul* 'table,' and *men* 'stone,' almost invariably is.

[2] It is curious to note the different theories afloat amongst our modern *savans* respecting the age of these 'flint-implement' manufacturers. Some consider that they had only a slight vocabulary, and could suggest ideas to each other by sounds almost articulate. Others think they were so low in intellect that it is doubtful whether they had any language at all. Sir Charles Lyell computes that 150,000 years passed without any improvement in the 'make' of their

follows that they were tools made by some imaginary race of pre-Adamite men. It is a gratuitous assumption to designate them 'tools,' to which title they may have no more claim than a spider's web has to the same. A flint implement, which we may call a 'hatchet' or a 'knife,' does not necessarily imply a human fabricator. Could not any brute, with far less constructive intelligence or instinct, or whatever we may term it, than the spider or the bee, and having the hands of an ape, rub or chip a piece of stone to an edge, and form for himself one of these rude implements, if such were necessary for his support or to his defence from attack? Suppose the bee and the wasp had been pre-Adamite creatures never reproduced, and that a fossil honeycomb, or the fossil impression of one, had been dug up, what would have been our natural inference on the discovery of so beautiful a specimen of geometrical science? Should we not conclude that the human hand, tools of human fabrication, and even high intellectual skill, had all been employed in the construction of a fabric of such exquisite workmanship?

Admitting, then, that these flint implements were in reality the fabrications of pre-Adamite creatures, the evidence which they supply is far too weak and scanty to justify the conclusion that they were the productions of human beings, for as M. Castelnau, a distinguished French savant, has well remarked: 'Much more mental energy would not be required by the gorilla to produce similar instruments.'—*Anthropological Society of Paris*, Séance November 17, 1859.

Moreover, the age of the *beds* in which these flint implements have been found is a matter of dispute amongst geologists at the present time. Mr. Prestwich concludes that 'the evidence seems as much to necessitate the bringing forward of extinct animals towards our own time, as the carrying back of man in geological time.' To the same effect is the language of another eminent geologist, Principal Forbes, who says:—

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weapons, which could scarcely have been the case had they enjoyed the benefit of being able to talk the matter over, or to hear lectures from such Professors as Darwin or Huxley, respecting the *Origin* o their own race.

The tendency of the whole investigation is as much to reduce the interval which separates us from that epoch as to draw back the creation of man into the depth of the abyss of geological time. It is impossible to assign with the least degree of certainty the number of centuries or thousands of years to allow of the disappearance of any widely spread species. It seems very improbable that such a tomb as the burial cave of Aurignac transcends in antiquity the limits usually assigned to historic records.

And so a recent writer, after a patient examination of the whole subject, has arrived at the following conclusion, which we commend to the attention of those who are still inclined to doubt the force and value of this line of argument against so great an antiquity of the human race.—1st. That the flint arrow-heads bear unmistakable indications of having been shaped by man. 2nd. That the mere fact of their being mixed with the bones of extinct quadrupeds is no evidence of contemporaneity, and that the age of the human relics is *not proven.* 3rd. That the age of the mammalian bones with which the flint implements are associated cannot be determined. 4th. That a remote prehistoric antiquity for the human race from the discovery of specimens of man's handiwork in the so-called Diluvium is *not proven.—Blackwood's Magazine*, No. 540.

Other grounds have been adduced for the great antiquity of man from a supposed chronological succession of periods, termed by the Danish antiquaries the ages of *stone*, *bronze*, and *iron*, so called from the materials which in their turn have each served for the fabrication of implements. There was a delightful simplicity about the system which made it speedily popular. Everyone could distinguish between stone, bronze, and iron relics, and as this was all the knowledge required to determine the age of any implement found in caves, or tumuli, or dolmens, it was universally adopted. Had Denmark been always inhabited by the same progressive race who now form the bulk of the population of that country, it might have held its ground. Where it fails is, that it takes no account of the undoubted fact that some races are as non-progressive as the Negro or the Red Indian. It forgets that the aborigines in the south of France were almost identical in their habits with the Esquimaux of the present day; and that their tools and implements can

hardly be distinguished from those now in use in the regions of the North Pole. It forgets that there are other races which rise to a certain stage of civilization, but cannot advance beyond, and when brought into contact with higher races, disappear and leave no written record of their existence.[1]

Now we find Sir Charles Lyell, in his *Geological Evidence of the Antiquity of Man*, p. 28, adopting the assumption of M. Morlot,[2] that the *iron* age represents an antiquity of 2,000 years, the *bronze* between 3,000 and 4,000, and the *stone* from 5,000 to 7,000 years; which of course conflicts with Scripture chronology, as unitedly these would represent a period of more than 10,000 years.

We should, however, remember that the three ages of stone, bronze, and iron, do not afford an universal chronology, but at most are applicable to the progress of civilization in the particular region where such relics are found. The *stone* period may be regarded as the existing one for the Esquimaux and Australians, as the bronze age was for the Mexicans in the time of Columbus. The 'Kitchen-Middens,' or shell-mounds of ancient Denmark, as Admiral

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[1] Thus, for instance, there is reason to believe that when Cæsar invaded Britain, two entirely different races were settled in our island. The one are spoken of as those who built houses, dressed in black garments, coined money, used chariots, extracted metals from the earth, made bronze tools, grew corn, and perhaps had some knowledge of letters. The other race are described as a people who went about unclothed, who adopted the custom of painting their bodies, who dwelt in tents, were ignorant of agriculture, used *stone hatchets*, and in all probability practised cannibalism. For Jerome in the fourth century mentions having seen a British tribe called the *Attacotti*, who dwelt on the north side of the wall of Hadrian, feeding on human flesh, as he remarks that these savages, 'though they had plenty of swine and cattle in their forests, preferred the flesh of men and women in their horrid feasts.'

[2] Mr. Patison, F.G.S., in his *Examination* of Sir Charles Lyell's work on the Antiquity of Man, confronts M. Morlot's conclusion that the stone-axe period must be thrown back to 5,000 or 7,000 years, by quoting an instance of an undisturbed barrow, opened near Lubeck, which contained a sepulture of the *stone* age in its core, implements of the *bronze* period on its sides, and a burial of the *iron* age on its summit. Hence Mr. Patison agrees with Worsae in concluding that a date of about 3,000 years only can be assigned as the commencement of the epoch of fixed dwellings and polished *stone* implements.

Fitzroy pointed out some years ago in a letter to the *Times*, are exactly the same as those of the Fuegians in the present day. Hence the conclusion of the eminent Danish archæologist Worsae is against allowing any very high antiquity to these non-historic ages:—

It will be seen, says this most competent witness, that the *stone* period, though of great antiquity, cannot be more than 3,000 years. And there are geological reasons for believing that the *bronze* period may have prevailed as far back as 500 or 600 years B.C.

This estimate accords with the recent discoveries by M. Ramsauer, Director at the salt mines of Hallstadt in Austria, of many relics of the 'bronze and iron ages,' an account of which was communicated by M. Fournet to the well-known M. Élie de Beaumont, and by the latter communicated to the Academy of Sciences. In the midst of an Alpine valley in the neighbourhood of Hallstadt, M. Ramsauer discovered and explored no less than 963 tombs of the ages of *bronze* and *iron*. The objects found in these tombs were of great interest; amongst them 182 bronze vessels, the largest of which were ninety centimètres in height. Besides these there were scarfs and belts, not of skin or textile materials, but of thin bronze with ornamental chasings exactly similar to those found in Helvetia and ante-Roman tombs. M. Ramsauer also discovered in the salt mines the old galleries worked by the ancient race, whose tools of bronze he found, as well as a fibula similar to those in the tombs, from which it is ascertained that these mines must have been worked about '*four centuries before the Christian era.*'

Further, we have Scripture proof of the use of *stone* implements within the period of historic times; for did not Zipporah the wife of Moses (*Exodus* iv. 25) and Joshua (v. 3) both avail themselves of *stone* knives in order to perform the rite of circumcision, long after the stone age is supposed to have passed away? And it is not a little remarkable, in confirmation of our argument, that the very stone knives which were used on the occasion were buried in the tomb of Joshua according to the LXX. version of *Joshua* xxiv. 30. Supposing for a moment that all the historic records of the Hebrew race had entirely disappeared, and that an antiquarian philosopher of the

nineteenth century had discovered amid the ruins of 'Timnath-serah, which is in Mount Ephraim on the north side of the hill of Gaash,' the tomb of the Patriarch Joshua with its bones and *stone* implements all around, what would have been the conclusion at which he would have instantly jumped? Judging from the hasty inferences of those who ignore Scripture authority on all matters when it seems to conflict with what they deem science, it is not difficult to decide.

Sir Gardener Wilkinson, in his *Manners and Customs of the Ancient Egyptians*, iii. 262, gives an account of flint knives found in their tombs, the use of which was retained for certain religious purposes long after bronze and iron had been familiar to them; as Herodotus (ii. 86) mentions that the Egyptians were wont to make an incision in the body of a dead person, when brought to be embalmed, 'with an Ethiopic stone.'

When Sir John Lubbock, in his *Prehistoric Times*, p. 145, describes a tomb at Kertch, in the Crimea, in which were found ornaments of gold, silver, and electrum, with carved ivory, and vases in the most elegant style of Greek workmanship, showing that its date was probably as late as the time of Alexander the Great, together with a *large heap of sharp flints*, we see at once how strongly it tells against the theory of a *stone* age proving any very high antiquity for the race of man. Nevertheless the same authority, in his description of the three mounds at Upsala, in one of which were discovered the bones of a woman, together with a gold filigree bracelet, some dice, chessmen, &c., according to Marryat's *One Year in Sweden*, ii. 183, has no hesitation in declaring all these things as 'entirely prehistoric.'—P. 107.

In the same manner, when we find antiquarian speculators declaring that the pile-built villages of the Swiss lakes must belong to a period long anterior to the building of the Great Pyramid of Ghezeh, supposing that to be the oldest known monument of man on earth, we naturally ask for something like proof, and think, as in the previous instance, we shall have to ask in vain. The Swiss lake-dwellings may possibly be as old as the Pharaohs, though we have no reason to think them older than that Thracian tribe mentioned by Herodotus (v. 6), who had their habitations

in the middle of the Lake of Pæonia, now Roumelia, in the sixth century B.C. But mere speculations or conjectures, such as certain geologists offer, that if a certain peat formation required 7,000 years for its completion, then the human remains discovered in it must have been more ancient than the Bible chronology allows, have very little weight in the investigation of such matters, for Sir Charles Lyell candidly admits, that 'the depth of overlying peat affords no safe criterion for calculating the age of remains underneath.'—*Antiquity of Man*, p. 32. And nothing like proof has yet been offered in support of the hypothesis that the first lake-man drove his first rudely-pointed fir-stem in the Swiss waters 1,500 or even 1,000 years before the Christian era.

When Mr. Alfred Taylor read a paper at the *Geological Society* four years ago on *Valley Gravels*, in which he maintained that the drift of the Somme Valley was of marine origin, and that the *flint implements* introduced there by floods, were of recent date, Mr. Prestwich, although he combated both these conclusions, admitted that the gravels had been deposited by an action far more powerful than any known instance in the present day, and, therefore, in far less time than could now be deduced from existing operations; while Dr. Dawson of Montreal, accustomed to the grand scale of transatlantic physical phenomena, was unable to see anything in the gravels of the Somme Valley requiring longer time than the received chronology of the Bible. This is a wise conclusion, and induces a hope that the hypothesis of enormously long periods since man coexisted with extinct animals, which has so bewildered the brains of many, will be considered by all sober-minded geologists as unnecessary, and will ere long be entirely given up.

From a review of what has been considered, the chief evidence respecting the age of man on earth may be thus summarily arranged under the heads of Scripture, Geology, Archæology, and History.

A correct computation of the *Hebrew Scriptures* shows Adam to have been created about 6,000 years from the present time. The LXX. version allows an extension to that number of about 1,500; but, as I have already said, after a prolonged investigation of the subject, I am con-

vinced that the arguments in favour of the Hebrew outweigh those in support of the other.

Geology affords no positive proof whatever, whether in respect to the so-called ages of stone, bronze, and iron, or the lake-villages of Switzerland, or the flint implements, of the exact age of man on earth.

History, as I have before pointed out, offers no authentic proof of anything earlier than 2400 years B.C.

Archæology.—The oldest existing monument[1] of any nation on the face of the earth is the Great Pyramid of Ghezeh, the date of whose erection appears now to have been settled by astronomical science at B.C. 2170. For Sir John Herschel having at the request of Colonel Howard Vyse made a calculation respecting the probable date of its erection dependent upon its orientation, determined the period to fall within the limits of B.C. 2171–2123.

And Professor Piazzi Smyth, by further observations, has confirmed this date still more accurately, proving that in the year 2170 B.C. 'the Pleiades were then, *in that year alone, of all years for more than* 10,000 *past and to come*, in such a position as to be seen from the gallery of the Great Pyramid crossing the meridian above the pole and near the equator.' For a full account of this interesting problem the reader is referred to Professor Smyth's two works on the subject, viz.: *Life and Work at the Great Pyramid*, in three vols., and *On the Antiquity of Intellectual Man, from a Practical and Astronomical Point of View*. The conclusion to which the above-named astronomers have come respecting the date of the Great Pyramid accords with the declarations of Champollion, that 'no Egyptian monument is really older than the year 2200 B.C.;' and with the expressed opinion

[1] Although the Great Pyramid is termed the oldest existing monument of man on earth, we must not overlook the discoveries of Mariette Bey in Egypt—such as the pyramid of Saqqarah, supposed to belong to the fourth king of the first dynasty; or the tomb of King *Senta*, at Oxford, belonging to the second dynasty; or the beautiful statues of the family of *Sefra* belonging to the third dynasty, which are necessarily older than the Great Pyramid, which was erected under the fourth dynasty; but the difference between the first and the fourth dynasties does not extend to above two centuries at the utmost, as is proved by the papyrus of Turin, which gives 355 years as the duration of the first six dynasties.

of the celebrated Cuvier, who addressed the Rev. Walter Mitchel when in England in these words:—

All my researches have brought me to this conclusion, that the geological changes on the earth do not require a longer period for their accomplishment than 6,000 years.—*Journal of the Transactions of the Victoria Institute or Philosophical Society of Great Britain*, vol. ii. p. 14.

With this strongly expressed opinion on the part of an 'acknowledged authority,' we draw to a conclusion our chapter concerning the Antiquity of Man.

UNITY OF RACE.

CHAPTER VI.

The Bible declares in language of unmistakable plainness, that it pleased the Creator to make of one blood all the nations of the earth, and that all mankind are the offspring of common parents. This is so notoriously the doctrine of Scripture, that it is surprising to think there should be any who could suppose the opposite opinion is taught therein.

The doctrine of *some* pre-Adamite race appears to have been put forth originally by Isaac de Peyrère, two centuries ago, and since then various writers have disputed of what these pre-Adamites consisted: some arguing in favour of *negroes*; others, that they must be *the fallen angels*. The philosophy of the present day meets the positive assertion of St. Paul, that 'Of one blood God hath made all the dwellers upon the earth,' by declaring that in this saying the Apostle merely—

> Shared the indefinite notion of that and every other age, and expressed his Christian philanthropy in the usual way, quite sufficient for his purpose.—*Man's Origin and Destiny sketched from the Platform of the Sciences*, by J. P. Lesley, Secretary of the American Philosophical Society, p. 94.

The same author further declares that—

> There is absolutely *no* reason for supposing the black man and the white man to be of one species, *except an absurd legend* ascribed to an ancient Shemitic lawgiver, and preserved among a number of similar legends of surrounding nations. . . . This hotch-potch of old Hebrew legends, made sacred to our hearts by lectures from the pulpit and recitations from the mother's knee—this tissue of absurdity, called *the biblical history of the origin of mankind*, is absolutely the sole and entire argument for not considering the human race as much distinct in kind and origin as are the lama and alpaca, or the hare and the rabbit, or the American bison and the European cow.—*Ibid.* p. 117.

The denial of the unity of the human race was consist-

ently upheld by the encyclopædists of the eighteenth century, and was argued with all the power and talents of Voltaire, Rousseau, and their *confrères*. It has been revived in the present century by Agassiz, Nott, and others: the lack of new proofs or facts on which to ground their theories is supplied by boldness of assertion, as seen in the quotation already adduced, and the unfailing confidence wherewith they propagate their views. Thus at a meeting of the *Anthropological Society*, December 1, 1863, we find Mr. Carter Blake affirming that—

> In the present state of science we are perfectly justified in assuming that the negro and European were *distinct species of men*.

Dr. Hunt, then President of the Anthropological Society, declared that—

> In those anatomical differences in which the two differed, there was *pro tanto* a greater analogy of the negro with the ape than was shown by the white man.

In the *Transactions of the Ethnological Society* for 1865, Mr. Crawfurd, Vice-President of the Society, asserts that—

> The earth could not have been peopled throughout from a single point of its surface, and from a single tribe or family, and that all the theories founded on this assumption are but *the wild and incoherent dreams of learned and ingenious men* giving full rein to their imagination.

His fellow-associate Mr. Christie, however, does not accept this sweeping condemnation of the belief of Christendom, as, in his article on *the Cave Dwellers in France*, he distinctly says:—

> I am bound to confess that, so far, nothing in the investigation of the works of uncivilized or primitive man, either of ancient or modern times, appears to *necessitate a change in the old cherished idea of the unity of the human race*.

Thus it is seen that the direct physical evidence that the whole human race could not have sprung from a single pair, is fast disappearing from the scientific mind. The physiological testimony, it is now admitted, is not adverse or antagonistic to the positive teaching of Scripture on this subject. Hence the sound conclusion of Professor Wagner, who, from his position as teacher of comparative anatomy for many years, had the fullest opportunity as well as ability to investigate the question as to *Unity of*

Race. In a lecture on *Anthropology*, delivered at the thirty-first meeting of German Naturalists held at Göttingen, September 1854, the learned Professor says :—

If you ask me, on my scientific conscience, how I would formulate the final results of my investigations on this subject, I should do so in the following manner:—All races of mankind can be reduced to one original existing, but only to an ideal type, to which the Indo-European type approaches nearest.

With this testimony of an 'acknowledged' authority in favour of the teaching of Scripture, we may fairly take exception to a statement of Mr. Wallace in his essay on *Man in the Malay Archipelago*, that—

Ethnologists adopt the hypothesis that *man is not one* but many; that, wherever he originated, it was in several localities and under various forms; that, in fact, the chief races of man were aboriginally distinct, and were created as they are now found.

The question then arises, if the dogmatic assertions on the part of those who ignore the authority of Scripture are sufficient to overthrow the teaching of Revelation on this momentous subject? If the ethnologists of the present day were agreed among themselves, or if they could produce a single master-mind who adopted *their* 'wild and incoherent' speculations, we should feel more ready to give them a hearing. But in truth all those whose opinions are worth listening to, and who are accepted as 'acknowledged' authorities, are opposed to such crude and fanciful conceits.

Thus the difference in colour which exists amongst the human race, though all 'of one blood,' is accounted for by the distinguished naturalist Buffon on this wise :—

Man, though *white* in Europe, *black* in Africa, *yellow* in Asia, and *red* in America, is still *the same animal tinged only with the colour of the climate.* Where the heat is excessive, as in Senegal and Guinea, men are perfectly *black*; where it is less violent, the blackness is not so deep; where it becomes somewhat temperate, as in Barbary, Mogul, Arabia, &c., men are only *brown*; and lastly, where it is altogether temperate, as in Europe and Asia, men are *white.*—Buffon's *Natural History*, translated by Smellie.

Hence man, different from all other animals, equally thrives under the scorching sun of Africa, and the frost-bound regions of the North Pole; and being the only one which is by nature unclothed and at the same time able to clothe himself, belongs to all climates and all

seasons. He can adapt his clothing to the locality in which he dwells, so different in that respect from the speechless ape of the tropics, or the grizzly bear of the North Pole. Had man been born like a sheep, with wool upon his back, he might have been comforted by its warmth in the arctic regions, but it would have been a most unpleasant adjunct as the race extended towards the equator.

Moreover, the manifold evidence concerning the different colours of the human family being effected by climate, is conclusive in support of Buffon's opinion. That the negro is not of separate origin, marked off by his peculiarities from all neighbouring races, as certain *savans* assert, is evident from the general fact that there is a greater tendency to darkness of skin as we approach the tropics. Thus, as Dr. Latham, in his *Varieties of Man*, points out, we have the red-brown Egyptian Fellah blending with the swarthy Copt, and both running into the modified negro, as mixed with the Arabs in Nubia and more strongly marked among the Berbers. The negro of the Middle Nile is thus continuous with the Semitic type in the Arab, but lost again in the Northern Kaffre, only to reappear by degrees in the intensity of his characteristics, in the burning plains of Central Africa.

Mr. Winwood Reade, F.R.G.S., another 'acknowledged authority,' says on this subject:—

> I have always been anxious to impress upon men of science this *fact*, that the woolly-headed, black-skinned, fetid, prognathous negro is by no means to be regarded as the typical African. The real African is copper-coloured, and superior in every respect to the negro, mentally and physically. I went further than this, and asserted it as my belief that the negro inhabits only maritime districts, or the marshy regions of the interior: that he originally belonged to the copper-coloured race, and that his degeneration of type is due entirely to the influence of climate and food.—*Anthropological Review*, November 1864, p. 341.

Dr. Livingstone also, in his *Travels in South Africa*, distinguishes between the two, observing:—

> As we go westward we observe the light colour predominate over the dark; and then, again, when we come within the influence of damp from the sea air, we see the shade deepen into the general blackness of the coast population.

The testimony and the logic of facts do not prove that the *negro* is inherently and specifically a creature different

in derivation and formation from the *white* man, but that all his constitutional peculiarities are due to causes which may modify any variety of man. The women whom Dr. Wolff met in Cashmere, when escaping from their oppressors, said to him, 'Formerly the maidens in Cashmere were as beautiful as the sun, and *white like milk*, but tyranny has made us *black* and ugly.' Sir Andrew Smith informed Mr. Reade that the skin becomes black in the Hottentot when he is subject to hardship and hunger. And it is a fact, as Dr. George Moore declares, that the slaves, who labour without true joy, express the wretchedness of their condition in their features, and leave an aggravated impress of their misery in the complexion and features of their offspring.

A fine picture in stucco cut from the wall of a tomb at Gournou near Thebes, now in the Berlin Museum, affords an illustration of rapid change of colour amongst the races of Africa. The picture represents Pharaoh *Amenophis I.*, the 2nd king of the 18th Dynasty and son of 'the king who knew not Joseph,' and his mother *Ames-Nuf-Atre.* The faces in this most interesting portrait—as it shows the earliest known instance of the negro race, and is of a period about eight centuries after the Flood—which are given with close fidelity in Lepsius' great work the *Denkmäler*, represent the son with the usual pallid complexion of the Egyptians of that age, while the mother, who was an Ethiopian by birth and descent, is represented as black as a negress.

A story is related in the *Archives médicales* of the French Marine which fully confirms the theory of Europeans becoming black within the tropics, contrary to the assertions of certain ethnologists of the present day. A Portuguese trader, named *Da Souza*, died at Wildah in Dahomey A.D. 1849. He had made a large fortune as a slave-dealer, and having lived according to the fashion of his adopted country, left upwards of 100 children at his decease. Jealous of a growth of *half-breeds* among his people, the King of Dahomey compelled the family of Da Souza to reside in a particular locality, and prohibited them from marrying except among themselves. This order was rigorously enforced, and in 1863 notice was taken of the children of the *third generation*, the colour

of whose skin was discovered to be in the condition of *rapidly becoming deep black.*

An argument of some weight in the consideration of this question is to be found in the customs and traditions of some of the far distant and uncivilized nations of the earth. Thus we find that while the savage inhabitants of some of the Papuan Islands in the S. Pacific Ocean perform the rite of circumcision upon their male offspring to the present day, a custom derived from their ancestors without their knowing when or how it originated, they have the following tradition respecting the *Origin of the human race*:—

> The first man, who had previously been *a stone*, thought one day he would make a woman. He collected the light earth on the surface of the ground in the form of a human body, with head, arms, and legs. He then plucked out *one of his left ribs*, and thrust it into the breast of his earth model. Instantly the earth became alive, and up started the woman. He called her *Ivi* (according to English orthography it would be *Evee*), which is their word for *rib*.—*Nineteen Years in Polynesia*, by the Rev. G. Turner, p. 323.

Now I would fain ask how it is possible to account for such a tradition amongst the far distant islanders of Papuan, coupled with the fact of their practising the rite of circumcision, without accepting the Scripture declaration as infallible truth, that 'God hath made of *one blood all nations of men* for to dwell on all the face of the earth, and hath determined the times before appointed, and the bounds of their habitation'? (*Acts* xvii. 26.)

If any further testimony be wanted in confirmation of the doctrine revealed in the Bible concerning the *Unity of the human race*, as believed in and upheld by the greatest minds of the present age, we have it in the words of Professor Owen, who has given his attention to the subject for many years, and who now comes forward to express his mature judgment in a matter on which he is so well qualified to decide:—

> *The Unity* of the human species, says that distinguished palæontologist, is demonstrated by the constancy of those osteological and dental characters to which the attention is more particularly directed in the investigation of the corresponding characters of the higher quadrumana. *Man is the sole species of his genus*, the sole representative of his order and sub-class. Thus, I trust, has been furnished the confutation of the notion of a transformation of the ape into the man.—Owen's *Classification of Mammals*, p. 103.

Although Professor Owen's argument is more peculiarly addressed to the question of *species*, and not to *race*, it follows, of necessity, as we may fairly assume, that the latter is a corollary of the former. Thus Dr. Pritchard, whose masterly work on the subject, though often attacked, has never been refuted, sums up his argument as follows:—

On the whole, it appears that the information deduced from this fourth method of enquiry is as satisfactory as we could expect, and is sufficient to confirm, and indeed, by itself to establish, the inference that the *human-kind contains but one species*, and therefore, by a second inference, but *one race*. It will, I apprehend, be allowed by those who have attentively followed this investigation of particulars, that the diversities in physical character belonging to different races present no material obstacle to the opinion, that *all nations sprang from one original*—a result which plainly follows from the foregoing considerations.—*Researches into the Physical History of Mankind*, by James Cowle Pritchard, M.D., F.L.S., vol. ii. p. 589.

GIFT OF SPEECH.

CHAPTER VII.

Scripture records the creation of Adam in the full possession of his faculties, especially in the gift of speech, as his first act was to 'name' all the beasts of the field over whom God had given him dominion; and that these 'beasts' never enjoyed a similar gift is patent to the common sense, notwithstanding all that certain *savans* have sought to prove to the contrary.

About a century after the time of the Flood, the Bible represents uniformity of language amongst the existing race of men, which, according to the natural rate of increase, would then have amounted to about 50,000. Thus read in *Genesis* xi. 1: 'And the whole earth was of one language (lit. *lip*) and of one speech.'

It is satisfactory to know that a cylinder has been discovered among the ruins of Babylon with a cuneiform inscription of the time of Nebuchadnezzar, and interpreted by the skill of M. Oppert, in which 'the confusion of tongues' is distinctly mentioned, as we shall point out in a future chapter, and which, as we believe from Scripture, is the only way of accounting for such a variety of languages at the present time.

When man, in his pride, determined to build the Tower of Babel, in order, as it is written, to 'make us a name, lest we be scattered abroad upon the face of the whole earth,' Jehovah Himself thought fit to 'confound their language'—to mingle with the gift of speech an element of repulsion which it did not possess in the antediluvian world. Hence we read of His saying, 'Go to, let us go down (lit. *we will go down*), and there confound their language,' or lips, 'that they may not understand one another's speech. So Jehovah scattered them abroad from

thence upon the face of all the earth : and they left off to build the city. Therefore is the name of it called Babel (*confusion*) : because Jehovah did there confound the language of all the earth.'

Such is the simple statement of the will of the Most High and its execution in confounding the purpose of rebellious man. The philosophy of the present age denies this very reasonable mode of accounting for the variety of tongues in man, and the absence of speech in beast. Hence we find Mr. Crawfurd, the President of the Ethnological Society, in his speech at the Manchester Meeting of the British Association in 1861, saying :—

Man when he appeared on earth was destitute of language—that each separate tribe framed a language of its own, and that in each case the framers were arrant savages, which was proved by the fact that the rudest tribes ever discovered had already completed the task of forming a perfect language, and in every case had to achieve the arduous and tedious task of *constructing speech*, which, in the rudest form in which it is now found, must have taken many years to accomplish.

When the same wild speculator, at the Birmingham Meeting of the British Association in 1865, adopted a similar line of argument, and was asked in consequence to give a single instance of a savage race who had civilized themselves, or found speech by their own intellectual acumen, he was *ominously silent*. For it will be admitted that the intellectual differences between the different races of mankind are still less strongly marked than the physical. We contrast intellectually the Negro and the Caucasian, and at first sight there appears an immense disparity. But a very cursory examination is sufficient to prove that the superiority of the latter is chiefly caused by adventitious circumstances.[1] Civilization is not the necessary result of a state of intellectual development. History does not record an instance of a nation attaining civilization without extraneous assistance. We get our laws

[1] The present Bishop of Sierra Leone is a Negro of full blood, originally a captured slave, and who eventually obtained his bishopric by his cultivated talents, as proved by his written despatches to the satisfaction of Lords Palmerston and Russell. Now had the Bishop been allowed to run wild in his native country, he would at the present time have been neither better nor worse than the rest of his countremen.

from Rome, our taste for literature and arts from Greece, and our religion from Judæa; but had these nations of old never existed, can we imagine that the Celt or the Teuton would have been spontaneously equal to that of Europe in the present day?

Another philosopher of the same school as Mr. Crawfurd, only a denizen of that wonderful country which has been so boastingly described by one of its citizens as 'bounded on the North by the Aurora Borealis, on the East by the rising sun, on the West by the horizon, and on the South as far as we choose to go'—advocates a similar theory of man's power to construct speech for himself under the singular terms of the 'bow-wow theory,' or method by *imitation*, and the 'pooh-pooh theory,' or method by *interjection*. Such is the name given to the theory by Professor Max Müller in his *Lectures on Language*, though he laudably endeavours, like Cervantes, who

Laughed Spain's chivalry away,

to turn into ridicule one of the many speculative follies of this progressive age. For, speaking of the *bow-wow* system, on which he is deservedly severe, he says 'the onomatopœic theory goes very smoothly as long as it deals with cackling hens and quacking ducks, but round that poultry-yard there is a dead wall, and we soon find that it is *behind that wall that language really begins*.

Hence Professor Lesley, in his *Man's Origin and Destiny sketched from the Platform of the Sciences*, after indulging in certain speculations as to the language spoken in Paradise, whether it could have been Hebrew, Sanscrit, Coptic, Armenian, or Welsh, tells us that—

> The progress of the science of comparative philology has extinguished one by one all those absurd pretensions, even without the necessity of a reference to the goodness of the foundation on which they rested, viz. *the truth of the legend of a Paradise and a first human pair*. Comparative philology is one of the most beautiful and attractive of all the modern sciences. It has an immense coterie of disciples and many masters. It has established laws which are unshakable. *It is a world of truth; no one doubts it.* It is, in some respects, fully the equal of the other sciences. . . .
>
> The origin of language may be regarded either, first, as a supernatural revelation of a language already perfect to the first human beings; or, second, as a power of language given to the first human beings in addition to all their other peculiar faculties as human beings; or, third,

as merely a superior development of a *general power of language possessed by the whole animal world, inherent in the constitution of all animated beings as well as man.* The *second* and *third* modes of conceiving of the origin of language are the modes now adopted by men of science. And they only differ in degree according to our views of *the relative dignity of man and the brutes.*

The Reverend Dunbar Heath, M.A., F.R.S.L., F.A.S.L., once a clergyman of the Church of England, in a paper *On the Acquirement of Language by Mutes*, read before the *Anthropological Society* three years ago, tells us that after having endeavoured to investigate the subject from a *scientific* stand-point, he has arrived at the conclusion that the original inhabitants of Europe must have been *mutes*! Though he adds, somewhat paradoxically, that these *mutes* possibly possessed the power of speech :—'I wish my readers to understand that *by mute men I mean men who may or may not use words*, but who only express emotions by them, and that such emotions are the individual *emotions* of the mute being.'

After concluding that such was the condition of Europeans in the days of 'woolly elephants, rhinoceroses, and kitchen-middens,' Mr. Heath proceeds to give us an idea—not exactly of the *origin* of language, because his *mute* men appear to have somehow possessed the *root* of that science, but of its mode of transmission from tribe to tribe in early times after having once been acquired. He then draws a graphic picture of the state of things among our European ancestors before the Aryans came among them in order to teach them how to speak.

I am about, he says, to bring before the reader a conception of certain *kitchen-middens* occupied by what I call mutes, and subjected to the rationalising influences of a further advanced set of men whom I call speakers.

He then proceeds to illustrate how rationalistic emotion may have originated in the following interesting way :—

That I may direct the thoughts of my readers into a channel which would lead, I think, to *profitable results*, I will give two instances of what I mean by rationalisation of emotion. One shall be in low mute mammal, the other in speaking man.

I will suppose, then, a low mute mammal, such as a tame guinea-pig, to be taken by the inexorable boy who owns it for a series of nice warm-water baths, on the plea that it is good for the wretched animal to have a washing. Now, judging from what I hear has happened in such a case, I understand that for the first time or two the

animal shows mere abject emotion, by its utterance of piteous cries or squeals. At the third, or even second time, however, the emotion diminishes. The *rationalised emotion* becomes an idea of a something external to be resisted. Ratio or comparison begins to take place. The cry now becomes a grunt of anger, which is a less absorbing emotion than fear; and like General Lee, the overpowered animal at the fourth time fights, bites, and scratches to its very utmost, deserving a better fate.

In the next example *rationalisation* has advanced still farther. Let the mute mammal be a speaking man, walking along a lonely road, and the inexorable boy a highway robber. A sensible, or *rationalised man*, when met in such a case, feels neither fear, nor even anger. He recognises the inevitable, hands out at once his purse, and politely hopes the wife and family of the depredator are salubrious. Here the power of language enables the two parties so fully to understand each other, that the natural inward individual emotion passes wholly into an external interchange of ideas common to the two!

Mr. Heath further explains his ideas respecting the origin of what we suppose must be called 'the *rationalistic* school,' which is so numerous at the present time, in the following instructive manner:—

The scientific evidence in favour of the traditionary view (*i.e.* the Biblical account of man's creation) *being absolutely none at all of any kind whatever*, I compare it therefore *unfavourably* with the other view now rising into public notice. This view is, that during and after the tertiary and geological epoch, the highest mammals then on earth were becoming more erect in their way of walking, less hairy in their bodies, and more like in general to what the lowest men are now. Such beings are supposed during these changes to have also gradually *rationalised some of their emotions*, by the use of mental powers, though not so much beyond what the average of them possessed as to presuppose a *miraculous development*.

If we can by this time conceive to ourselves the clever chief of two or three hundred of such merely emotional inhabitants of a kitchen-midden, struggling into the semi-emotional, *semi-rational* state of expressing I *will* kill, we shall now be able all the more readily to follow such a chief and his tribe, in the circumstances under which I proceed to depict them.

Mr. Heath then proceeds to account for the formation of our modern languages by the following train of thought. He depicts a small band of six well-armed and speaking Aryans (though, singularly enough, he omits to state *how* they acquired the power of speech—*cela n'importe*) coming suddenly upon a crowd of these European 'kitchen-middeners,' and imposing their language on these unfortunate mutes, which, he considers, they would at once adopt *nem. con.* And then he swimmingly proceeds:—

Now follow the leader of the six Aryans in his first lesson to the crowd of 200 mutes around him. Naturally he would get the crowd to pronounce after him some short syllables such as *pa, ta, ka,* to illustrate the use of lips, palate, and throat, and very naturally the four or five men, *or women more likely,* just in front of him would pronounce them rightly, but not one man in fifty can tell the real effect of his work on a crowd. On returning to their wigwams much would be *the emotion of risibility and imitativeness* displayed that night among the natives!

The same high authority of the sceptical school adopts in the *Anthropological Review*, No. XIII. p. 36, another theory respecting *the origin of speech*, or, it may be, the veritable way by which the Aryans, the instructors, as we have seen, of the 'kitchen-middeners,' acquired that useful power. He supposes that at one time European apes abounded, and that these were the fathers of European men, who were at first dumb, but who in course of time '*gasped after articulation and got it.*' He says:—

I confine myself to the accepting and explaining known and knowable phenomena. It is *known* that anthropoids existed throughout Europe. It is *knowable* that they became mute men. It is knowable that these mutes *gasped after articulation,* and in a few spots attained to it. Those who did so at one particular spot I call *Aryans,* whether that spot was in Asia or in the submerged continent of Atlantis!

We have already seen Mr. Heath's process of transforming *mutes* into talkative Europeans, skilled in all foreign languages like the great Cardinal Mezzofanti of polyglott renown; but if any wish to know how the red apes first became mute men and then gasped after articulation and got it, they may possibly discover the *modus operandi* in the article referred to above; or, if they fail in this curious investigation, as will probably be the case, they may attribute it to the dulness of their monkey blood still meandering through their dull brains, which prevents them from mastering at once this interesting scientific problem. Such is the mode by which one of our speculative philosophers of the present day accounts for man having acquired the power of speech—an hypothesis of which it may be affirmed, that, while it ignores all Scripture authority on the subject according to the practice of the 'rationalised emotional' school, it is well-nigh as ingenious as the circumstances of the case

permit, and against which little else can be urged than that it must seem rather cumbrous and fanciful to those who do not know anything of *Anthropology*, and on the whole somewhat inadequate to those who do.

Another theory connected with our present subject has been recently taken up by some of our modern *savans*, and then put forth in their accustomed positive way. Thus Professor Lesley, as we have already seen, declares that the *gift of speech* is inherent in the constitution of man and beast alike, or, to use his exact words, 'a general power of language is possessed by the whole animal world;' but this theory appears to be nothing more or less than a plagiarism from the ancient philosophers, who were unblessed with a revelation from on high, as the following instances will show.

Thus Homer represents Xanthus, the horse of Achilles, as having been rewarded by Juno with the gift of speech. Pythagoras,[1] according to Porphyry, taught philosophy to the beasts of the field, and when he saw the ox of Tarentum destroying some crops, he desired the herdsman to leave off stealing; and on his replying that he could not speak *the language of beasts*, 'the philosopher,' says Porphyry, 'approached the animal, and after *talking in his ear for awhile*, the ox directly left the field in which were the beans, and ever after refused to eat them any more.' Manetho mentions a lamb as having spoken in the reign of Bocchoris, King of Egypt. Livy tells us that an ox once uttered these sage words, *Rome, take heed to thyself.* Lactantius, or the author of a work attributed to him, *De falsâ Religione*, alludes to the ass which carried Bacchus across the river, and, according to the heathen creed, was rewarded in consequence with a human voice.

Jacobus de Voragine, Archbishop of Genoa in the thirteenth century, was the first Christian author apparently who supposed animals could speak, as in his *Golden Legend*, which contains an account of the mythic contest at Rome between Simon Peter and Simon Magus, the dogs of the

[1] According to Jamblichus, Pythagoras went a step beyond even teaching beasts to speak. For on one occasion, when the great philosopher addressed a few words to the *Nessus*, Jamblichus tells us that *the river replied in a clear voice*, and saluted him by exclaiming, '*Pythagoras!*' —*Vita Pythagor.* cap. 28.

Samaritan impostor are represented as being endowed with the power of speech. And to come down to modern times, the learned Jesuit Bougeaut, after the archiepiscopal example, in his *Philosophical Amusement on the Language of Beasts*, declares that—

> Every ruminant and *loquacious animal* is inhabited by a separate and distinct devil, and that not only was this the case with respect to cats, with whom familiar spirits, as is well known, fondly dwell, but that a peculiar devil swam with every turbot, grazed with every ox, soared with every lark, dived with every duck, and was roasted with every chicken.

So M. Boudin, in his *Études anthropologiques*, published in Paris about six years ago, after citing Cicero's definition of man as 'the *only* animal which has knowledge of God,' takes exception to the argument of the Roman philosopher on this wise, saying:—

> Buddhism alone has the credit of attempting to *teach religion to beasts*. The author of a Tibetian work, translated into the Mongol tongue, and from Mongol rendered into French by Klaproth, who treats of the origin of the progress of the religion of Buddha in India, and in other Asiatic countries, recounts the following:—'When the veritable religion of *Chackiamouni* had been spread in Hindostan and among the most distant barbarians, the high priest and chief of the Buddhist faith, not seeing any others of mankind to convert, resolved to civilize a large species of monkey called *jaktcha*; to introduce among them the religion of Buddha, and to accustom them to the practice of duties as well as to the exact observance of sacred rites. This enterprise was entrusted to a mission under the direction of a priest regarded as an incarnation of the saint *Khomchin-Botitaso*. This priest succeeded perfectly, and *converted a prodigious number of apes to the Indian faith!*'

We are tempted to smile at the idea of apes being taught the Indian faith, which of course implies the power of speech as included in the acquirement of learning: but if this be too ridiculous for us to believe, must not the prevailing opinions of many *savans* at the present time that *Man's origin* is derived from monkeys, which we shall have to discuss in the following chapter, be ridiculous likewise? Well may M. Boudin observe that—

> Just as the diseased eye bears everything better than light, so the mind diseased with the evil of pride accepts *anything rather than the truth*. Instead of attaching itself to transcendant truths which enlighten, it gives itself over to astounding errors which delude.

Upon a review of what has been brought forward by the promoters of the theory that all the animal world—

man and beast alike—were endowed with the gift of speech, we scarcely think that it needs any serious refutation; and that it will be sufficient if we remind our readers of the old University legend, which tells of a puzzled examinee, when 'in for his degree,' being asked to give an instance from Scripture of an animal having once been supernaturally gifted with the power of speech, and having some floating ideas in his mind about Balaam's ass, Jonah's whale, and the Apostle Paul before King Agrippa, promptly answered—'And the whale said unto Moses, almost thou persuadest me to be a Christian!'

THE ORIGIN OF MAN ACCORDING TO MODERN THEORIES.

CHAPTER VIII.

The Biblical record of man's creation is thus stated in Genesis :—

> And God said, Let us make man in our image, after our likeness— So God created man in His own image, in the image of God created He him; male and female created He them. And the Lord God caused a deep sleep to fall upon Adam, and he slept; and He took one of his ribs, and closed up the flesh instead thereof: And the rib which the Lord God had taken from man, made He a woman, and brought her unto the man. And Adam said, This is now bone of my bones and flesh of my flesh: she shall be called Woman, because she was taken out of man. And unto Adam God said, Out of the ground wast thou taken; for dust thou art, and unto dust shalt thou return.

In reference to this Scripture statement, Dr. Moore, in his work on *Man's Place in Creation*, p. 128, relates that being present at the Anniversary Meeting of the British Medical Association in 1863, he heard a chemist advance as a valid argument against the truth of the Scripture record that man's body was 'formed of the dust of the ground,' because he had failed to discover any *alumina*, *i.e.* clay, in analysing a human body! This, however, was rather too strong a dose for the large number of medical men then present, who very properly 'took an early opportunity to protest against the absurdity.'

The Divine record concerning *Man's Origin* does not approve itself to the 'professing wise' men of modern times, and as it is expressly said of such in Scripture that 'they have sought out for themselves many inventions,' even so have they sought out a variety of theories in order to account scientifically for the beginning of the human race. These may be reduced to the four general heads

of the *egg* theory--the *monkey*—the *worm*—and the *primeval fungus*.

Our object in this and the following chapter will be to show,—1st, *how* these various theories have gradually grown up, and then been adopted, for the edification and perhaps to the amazement, of the non-scientific world.

2nd. To show that, however captivating and sensational they may appear to those who ignore the authority of Scripture, they prove upon examination to be very like plagiarisms from the heathen of old, who, being without a revelation from God, had some excuse for their curious speculative ideas respecting the descent and *Origin of Man*.

Distinguishing between ancient and modern speculators under the general term of heathen and Christian, and considering the latter first in order, we find quaint old Giraldus Cambriensis of the twelfth century as the earliest Christian author on record who appears to have had some idea of what is known as 'the transmutation theory,' or the mode by which vegetable passes into animal life. In his *Topography of Ireland* he thus explains the way by which *Barnacles* grow from fir-lumber in the Emerald Isle. He observes:—

> There are many birds here called *Barnacles*, which Nature produces in a wonderful manner out of her ordinary course. They resemble marsh geese, but are smaller. Being at first *gummy excrescences from pine beams* floating on the water, and thus enclosed in shells to secure their free growth, they hang by their beaks like seaweeds attached to the timber. Being in process of time well covered with feathers, they either fall into the water or take their flight into the free air, their nourishment and growth being supplied *while they are bred in this very unaccountable and curious manner from the juices of the wood in the sea-water.*

We have historic evidence that at this period the idea, which is now being revived by our modern *savans*, of the human race having occasionally the caudal appendage, in proof of the connection between man and beast, was entertained by our ancestors ; as Lambard, in his *Perambulations of Kent*, mentions the common belief in the south of England, that the inhabitants of Stroud near Rochester, in consequence of having insulted Thomas à Becket by cutting off the tails of his horses as he rode with his train through their town, were cursed so vigorously

by the angry primate, that their descendants, as a just punishment for their sacrilegious deed, were ever after *born with horses' tails.*

We have now to pass over the long interval of five centuries before we meet with any further evidence of the scientific world having adopted the hypothesis, now so much in vogue, of the *Transmutation of Species.* Gerard, an ingenious Frenchman of the seventeenth century, traces the origin of the *Pentalasmus anatifera*, or 'five-plaited goose-bearer,' to the *Barnacle leucopsis*, or 'Bernicle Goose,' which comes, he tells us, from the 'ship-barnacle.' But it will be more satisfactory to state the process of transmutation in his own graphic words, especially as he claims ocular demonstration for what he records. Thus he speaks :—

> What our eyes have seen and hands have touched we shall declare. There is a small island off Lancashire called the *Pile of Foulders*, wherein are the broken pieces of old and rotten trees cast thither by shipwracke, and also the trunks and bodies of old trees likewise; wherein is found a certain spume or froth, that in time breedeth into certain shells, in shape like those of the muskle, but sharper pointed and of a whitish colour; one end whereof is fastened into the inside of the shell, even as the fish of oysters and muskles, the other end is made fast into the belly of a rude masse or lumpe, which in time cometh to the shape or form of a bird. When it is perfectly formed the shell gapeth open, and the first thing that appeareth is the aforesaid lace or string; next come the legs of a bird hanging out, and as it groweth greater it openeth the skull by degrees, till at length it is all come forth and hangeth only by the bill; in short space after it cometh to full maturitie, and falleth into the sea, where it gathereth feathers and *groweth into a fowle.*

This certainly is a very curious specimen of the 'Transmutation theory,' especially as it shows the change which has come over the mind of the scientific world; for if a certain goose used in the imagination of our forefathers to come from the barnacle, science now brings the goose from the goose-egg, and nothing else. Just so if a germinal vesicle, as Dr. Moore supposes, is a germ always of a specific kind of creature, and never of any other, however analogous, what is there in the simple analogy that all germs are germs to lead a rational man to infer that all kinds of creatures originated in some one particular kind of germinal vesicle?

About the same period that Gerard flourished it happened that the famous *Dodo*, the fat bird of the Isle of Mauritius, became extinct, and as the philosophy of the nineteenth century has selected this bird as a notable instance of the *Transmutation theory*, it may be well to record the way by which the change was supposed to have occurred. It is argued that the primeval pigeons of the island, having too much on the ground to eat, and no need to fly, and getting into the condition of Jeshurun of old, did not 'plume their feathers and let grow their wings,' but grovelled and got monstrous fat, so that their wings, taking huff, dwarfed into a fluttering stump, and thus gradually became a *Dodo*. The following is a description of it by Sir Thomas Herbert, as it appeared in the seventeenth century:—

The Dodo, he says, is a bird which the Dutch call *Walghvogel*, or *Dod Erson*; her body is round and fat, which occasions the slow space, so that her corpulence is so great, as few of them weigh less than fifty pounds. It is of a melancholy visage, as though sensible of injury, in framing so massive a body to be directed by complimental wings, such indeed as are unable to hoist her from the ground, serving only to rank her among birds; her traine three small plumes, short and unproportionable; her legs suiting her body; her pounce sharp; her appetite strong and greedy; stones and iron are digested by her.

Such is the process by which, according to the scientific world, the gentle, graceful dove of old was transmuted into the fat, unwieldy Dodo, noted for its strong digestive powers, and its inability to fly—only fit to waddle on land, and scarcely able to float in the sea.

M. Maillet, another French *savant* of the eighteenth century, considerably improved upon Gerard's theory respecting the transmutation of one species of bird, viz. the Bernicle Goose, from rotten ship-timber, as he contended that the whole tribe of birds had once existed as *marine animals*, whether great or small, which, on being thrown on shore by the waves, had got feathers by accident; and that mankind are the descendants of a tribe of *sea monsters*, who, getting tired of their proper element, crawled up the beach one fine morning, and taking a fancy to the land, either forgot, or felt a disinclination, to return. From these terrestrio-aquatics the human race sprang!

Contemporary with Maillet lived that dreamy mystic,

Emmanuel Swedenborg,[1] who held somewhat similar opinions respecting the origin of the human race, which he taught as follows. Adopting the *egg-theory* of Sanconiatho, with the addition of a couple of suns to hatch them, in his work on *The Wisdom and Love of God* he describes creation as follows :—

In the tender leaves of herbs the rays of the inner sun formed eggs which were hatched by the heat of the outer sun into worms and caterpillars. Shrubs next twisted their officious twigs into nests in which eggs were developed, and birds of as many kinds flew forth as there were varieties of shrubs. Lastly, quadrupeds after their kind were bred from eggs, hatched and nourished with the help of trees, some bearing in their horns so many proofs of their descent from the forests.

There was a grove distant some furlongs from that in which Adam was hatched, and exactly similar in appearance. One evening Adam strolled into this grove, and night coming on, he lay down to sleep under an apple-tree, which was the *Tree of Life*. In a dream he saw a beautiful female; and when he tried to enfold her in his arms, she, like a light cloud, glided away from him. In his vain attempts to catch her, he so irritated the parts about the thorax, that *one of his ribs* seemed to leap out of its place, the nerves being so strained by the action of his mind, and the blood being put in commotion by the heart. After some effort he seemed to catch her and salute her; when at this moment he awoke, and found to his grief that he had been dreaming. Now Adam did not know that *the apple-tree*, under which he had been resting, *bore the egg from which his future wife was to be born*, and that it was her image he had seen in his dream; that the branch lying across his breast was what he had folded in his arms, and that *into the very egg* which he had saluted with so many kisses he had thereby infused a living soul from his own.

I believe this *egg-theory* for the *Origin of Man* has been recently taken up by Professor Huxley and other

[1] An eminent American philosopher of the present day, Professor A. J. Davis, thus describes Swedenborg:—'Under the sheltering wing of well-ascertained philosophical principles, this mountain-minded man of the North opened his hospitable doors to the most orderly cavalcade of strangers on theology. His spiritual inspections under the fertilizing streams of celestial inspiration gleam and glare with phenomenal light and glorious mystery. He himself declares that Christ had His coming at the end of the year 1760. But this was unobserved by the world. Hence this invisible circumstance would have most probably passed by entirely unnoticed, had not Swedenborg made his appearance. And his revealments are as reliable, supernatural, and infallible as the utterances of any personage connected with the Old or New Testament.'—*Grand Harmonia*, iii. p. 200.

distinguished *savans* in the present day. But if we come to look at it in a serious light, it is difficult to discover anything which deserves a moment's attention from a scientific point of view; *e.g.* it is known that an egg has certain powers as a living egg which distinguish it from a dead one. The late John Hunter, so eminent in his pursuit of science, showed that there was a power in the living egg of resisting cold, by which it might be distinguished from the dead egg. Moreover, when we look at the structure of a chicken, we see its marvellous make —such as the eye, the heart, the skeleton, all of which are formed without any knowledge of mechanics, or optics, or surgery, which it takes all man's wisdom imperfectly to find out. Now we know that there are certain beings in the world which require the conjunction of two agents for the production of their own species; while there are others which evolve their kind from themselves without such co-operation. Why, then, does not the egg evolve chickens without this aid, if the protoplastic egg-theory were true, when the acorn has in itself the power of producing an unlimited number of forests of oak-trees? Thus we see as a scientific fact that there is a power of structural formation possessed by some organic bodies which does not exist in other organic bodies; and is sufficient to refute the theory of tracing man's origin from the Swedenborgian *egg* or the primeval *fungus*.

Shortly after Swedenborg's time, Lord Monboddo promulgated another theory for the origin of the human race, which, though rejected *then* by the wisdom of our forefathers, has *now* been too readily adopted by some of the *savans* of the present day. Lord Monboddo is described by Dr. Johnson, in a letter to Mrs. Thrale, as 'a Scotch judge who has lately written a strange book about the origin of language, *in which he traces monkeys up to men*, and says that in some countries the human species have tails like other beasts.'—*Boswell*, iv. 73. I would suggest, it is possible that Lord Monboddo may have adopted his theory respecting man being an ape-descended animal through mistaking the metaphor which Shakespeare makes use of when delineating the character of man in his comedy entitled 'Measure for Measure':—

> . . . O, but man, proud man!
> Drest in a little brief authority;
> Most ignorant of what he's most assured,
> His glassy essence, *like an angry ape*,
> Plays such fantastic tricks before high heaven
> As make the angels weep; who, with our spleens,
> Would all themselves laugh mortal.

Some have imagined that Lord Monboddo, who was the first to propound the idea of man being, as he is now scientifically termed, 'a well-developed monkey,' inherited it from his Scotch ancestors; for it is evident that a belief in the *Transmutation theory* prevailed in Scotland until the commencement of the last century. In that strange book, *The Secret Commonwealth*, published by Robert Kirb, Presbyterian minister of Aberfoil, evil spirits in human form are represented as habitually living among the Highlanders. Captain Burt relates a long discussion he had with a minister on the subject of *old women turning themselves into cats*. The minister stated that one man succeeded in cutting off the *leg of a cat* who attacked him, that *the leg immediately turned into that of an old woman*, and that four ministers signed a certificate *attesting the fact*! (See vol. i. pp. 271 *et seq.*)

Although we find four ministers of the Gospel solemnly attesting the wondrous fact of a cat's leg having been turned into that of an old woman, it is contradicted plumply by Professor Huxley, who explains the principle of the law of growth and reproduction in the following instructive manner. In his *Lectures to Working Men* he mentions that—

> The Abbé Spallanzani, who made a number of experiments on salamanders, found that they might be mutilated to an incredible extent, that you might cut off the jaw, or the *greater part of the head*, or the leg, or the tail, and repeat the experiment several times, perhaps cutting off the same member again and again; and yet each of those types would be *reproduced according to the primitive type*; nature making no mistake, *never putting on a fresh kind of leg* or tail (the four Scotch ministers *non obstantibus*), but always tending to repeat and return to the primitive type.

Cutting off the greater part of the head of an animal, which is then said to have the power of reproducing itself, will serve to illustrate the well-known anecdote variously applied to Cromwell, Washington, and other celebrities,

and which is thus recorded by Miss Pardoe in her *City of the Magyar*. At a museum in Hungary *two skulls* of different size are shown to the visitor with this explanation:—'This,' says the exhibitor concerning one, 'is the skull of the rebel Ragotzi when *a man*;' and of the other, 'This is the skull of the same Ragotzi when he was a boy!'

A similar power of restoring, not the greater part of, but the entire head, after decapitation, is claimed by the Dervishes of Angora, as related by the Princesse de Belgiajoso, in her *Souvenirs de Voyages en Asie Mineure et en Syrie*, Paris, 1858. She states that—

> One fine morning, when reclining on my divan, I saw enter a little old man in a white mantle, with a grey beard and a green turban, who announced himself as the chief of certain Dervishes, performers of miracles, who had come with his disciples from the grand Muphti to show me their operations.

After performing various wonders similar to those enacted by the priests of Baal in their contest with Elijah, of gashing their bodies all over with knives, without leaving the slightest trace of wound, directly after—

> One of the Dervishes greatly terrified me by seizing with both hands a great crooked sabre, which he plunged into his body, making a see-saw motion as it entered. A stream of blood instantly showed itself; and I entreated the old man to allow it to proceed no further. He smiled, assuring me that I had seen nothing, that this was only the prologue; that *these disciples cut off their limbs with impunity*—their heads if necessary—without causing themselves any inconvenience at all.

A story has recently been going the round of the papers taken from the *Annales de la Médecine et de la Chirurgie étrange*, affirming an instance, not of reproduction, but of *restoration to life* after decapitation, the names, places, and dates, in brief, being as follows. On the 18th of April, 1868, in the prison of *Villarica* in Brazil, two criminals, named *Aveiro* and *Carines*, were executed at the same time in the interior of the prison. *Dr. Lorenzo y Carmo*, of Rio Janeiro, well known for his works on electricity applied to physiology, and his success in autoplastic operations, obtained permission to profit by the event, in order to experiment on the power of electricity. It is not necessary to repeat the details, which are minutely given in the aforesaid medical work, but it will be sufficient to say that the result was most extraordinary,

as after several days' trial and upwards of seven months' care, during which the individual on whom the experiment was made had his head sewn on, and the electric battery restored the suspended animation of his vital powers, he walked away with 'a perfect cure,' complaining only of feeling somewhat stiff in the use of his limbs! As if to make this extraordinary tale more marvellous still, the account states that through some mistake on the part of the operators, the *head* of one criminal was sewn on to the *body* of the other!

It is not our intention to express any opinion on the truth or falsehood of this singular tale. It is quoted for the purpose of argument on the subject we are considering. Let us, however, for a moment suppose it to be true; and that in place of the wrong human head, that of a gorilla or an orang-outang had been sewn on the body of the decapitated criminal, what would have been the effect? The difference between the base of the human skull and that of the tribe of *Simia* is so great, that it would have been simply impossible to keep the head in its proper place; because, whereas the joint-surfaces of the neck and skull correspond perfectly in man, those surfaces in the ape's skull are not in the line of the centre of gravity, but resemble those of beasts which walk with face and mouth prone to the earth. It is true that in the tribe of birds, which are bipeds like ourselves, with wings in place of arms, some may be able, like penguins, to sit as erect as we, but that is the position of their repose; man alone is erect in his activities—he alone can stand upright, with the centre of gravity in a line perpendicular from the crown of his head through the middle of the oblique arch of his foot.

The philosophic Lamarck must have thought otherwise, as he appears to have been the only 'acknowledged authority' of the last century who adopted Lord Monboddo's theory in respect to man being an ape-descended animal; and Hugh Miller, in his *Treatise on the Old Sandstone*, playfully throws out the idea of the descendants of the orang-outang being employed in some future age writing learned treatises on geology, and describing the remains of the *Quadrumana* as belonging to a distinct order; while Lamarck is carrying home in

triumph the skeleton of some huge salamander of the Lias, under the pleasing belief that he possessed the bones of his grandfather.

It is, however, to Sir Charles Lyell that we are indebted for the best account of Lamarck's theory respecting man's origin, as enunciated in his *Philosophie zoologique*, which he thus describes in his *Principles of Geology*:—

One of the races of *quadrumanous* animals, which had reached the highest state of perfection, lost by constraint of circumstances (concerning the exact nature of which tradition is unfortunately silent) the habit of climbing trees and of hanging on by grasping the boughs with their feet as with hands. The individuals of this race being obliged, for a long series of generations, to use their feet exclusively for walking, and ceasing to employ their hands as feet, were transformed into *bimanous* animals; and what before were thumbs became mere toes, no separation being required when their feet were used solely for walking. Having acquired a habit of holding themselves upright, their legs and feet assumed insensibly a confirmation fitted to support them in a direct attitude, till at last these animals could not go on all-fours without much inconvenience.

The Angola orang is the most perfect of animals; much more so than the Indian orang, which has been called the *orang-outang*,[1] although both are very inferior to man in corporeal powers and intelligence. These animals frequently hold themselves upright, but their organization has not yet been sufficiently modified to sustain them habitually in that attitude, so that the standing posture is very uneasy to them. When the Indian orang is compelled to take flight from very pressing danger, he immediately falls down upon all-fours, showing clearly that this was the original state of the animal. And thus children who have large heads and prominent stomachs can hardly walk at the end of two years, and *their frequent tumbles indicate the natural tendency to resume the quadrupedal state.*

In conclusion, it may be proper to observe that the above sketch of the Lamarckian theory is no exaggerated picture, and those passages which have probably excited the *greatest surprise* in the mind of the reader are *literal translations from the original.—Principles of Geology*, vol. ii. pp. 377 *et seq.* 5th edit.

Professor Owen, commenting on the Lamarckian theory, and alluding to Lyell's assertion that orangs had been tamed by the savages of Borneo, and made to climb lofty trees in order to bring down the fruit, quotes him as saying:—

It is for the Lamarckians to explain how it happens that the same savages of Borneo have not themselves acquired, by dint of longing

[1] *Orang* in the Malay tongue signifies 'a reasonable being;' and *outang* in the same language 'wild;' hence *orang-outang* means 'a wild man.'

for many generations for the power of climbing trees, the elongated arms of the orang, or even the *prenhensile tails of some American monkeys*. Instead of being reduced to the necessity of subjugating stubborn and untractable brutes, we should naturally have anticipated that their wants would have excited them to efforts, and that continued efforts would have given rise to new organs, which, in a manner irreconcilable with the principle of the *progressive system*, have grown obsolete in tribes of men which have such constant need of them.—Owen's *Anatomy of Vertebrates*, iii. 801.

Contemporary with Lamarck flourished the elder Darwin, grandfather of his more distinguished namesake, whose theory for the *Origin of Man* we shall have occasion presently to examine at length. Darwin sen., in his *Botanic Garden*,[1] gives the germ of the theory which has been more fully developed by his grandson, as conceived by a philosophic friend, who argued that 'the first *insects* were the anthers or stigmas of *flowers*,[2] which had by some means loosed themselves from their parent plant; and that many other insects were gradually in process of time formed from them, some acquiring wings, others fins, and others claws, from their ceaseless efforts to procure their food or to secure themselves from injury.'

So much for the opinions entertained by Dr. Darwin's philosophic friend respecting the *Transmutation of species* from vegetable to animal life. Those held by Dr. Darwin sen. himself have been so fully and humorously described by Mr. Canning in the *Anti-Jacobin*, that it would be scarcely doing justice to the subject if we omitted to notice it.

We may conceive, said the great statesman, the whole of our present universe to have been originally concentrated in a single point; we may conceive this primeval point or *punctum saliens* of the universe,

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[1] The same distinguished author, in his *Loves of the Plants*, so far from regarding 'the vegetable lamb of Siberia' as a ridiculous fable of the nature of the Bohn Upas-tree of Java, associates it with other undoubted facts of botany, and describes it as the veritable animal

Which lapp'd with rosy tongue the melting rime.

[2] Mr. Charles Darwin, in his work on *Orchids*, concludes that 'all plants with conspicuously coloured flowers, or powerful odours, or honeyed secretions, are fertilised by *insects*,' and that 'all with inconspicuous flowers, and especially such as have *pendulous anthers*, are fertilised by the *wind*'—an idea which our author appears to have taken from the Phœnician Cosmogony as explained by Sanconiatho.

evolving itself by its own energies, to have moved forward in a right line *ad infinitum*, till it grew tired; after which the right line which it had generated would begin to put itself in motion in a lateral direction, describing an area of infinite extent. This area, *as it became conscious of its own existence*, would begin to ascend according as its specific gravity would determine it, forming an immense solid space filled with vacuum, and capable of containing the present universe. Space being thus obtained, and presenting a suitable *nidus* or receptacle for the accumulation of chaotic matter, an immense deposit of it would be gradually accumulated, after which the filament of fire being produced in the chaotic mass by an idiosyncrasy or self-formed habit analogous to fermentation, explosion would take place, suns would be shot from the central chaos, planets from suns, and satellites from planets. In this state of things the filament of organization would begin to exert itself in those independent masses which, in proportion to their bulk, would expose the greatest surface to light and heat. This filament, after an infinite series of ages, would begin to ramify, and its oviparous offspring would diversify their former habits, so as to accommodate themselves to their various *incunabula* which nature had prepared for them. Upon this view of things it seems highly probable that the first efforts of nature terminated in the production of *vegetables*, and that these being abandoned to *their own energies* by degrees detached themselves from the surface of the earth, and supplied themselves with wings and feet according as their different propensities determined them in favour of aërial or terrestrial existence. Others, by an inherent disposition to society and civilization, and *by a stronger effort of volition, would become men*. These in time would restrict themselves to the use of their hind-feet, and their *tails* would gradually rub off by sitting in their caves or huts as they arrived at a domesticated state. They would then *invent language* and the use of fire. In the meanwhile the *fuci* and *algæ*, with the corallines and madrapores, would transform themselves into fish, and would gradually populate all the submarine portion of the globe.

The theory, so graphically described above, of Nature 'evolving itself by its own energies,' or, to use the scientific nomenclature of the day, 'the doctrine of self-evolution,' was advocated by Professor Oken of Zurich with great earnestness at the commencement of this century, as we find him writing in 1810:—

Physico-philosophy has to pourtray the first period of the world's development out of nothing; how the elements and heavenly bodies originated, in what method, by *self-evolution* into higher and manifold forms, they separated into minerals, became finally organic, and *in man attained self-consciousness*. There are two kinds of generation in the world—the creation proper, and the propagation that is consequent thereon; consequently, no organism has been created of larger size than an *infusorial point*. No organism is, nor ever has one been created, which is not microscopic. Whatever is larger, has not been created but developed. *Man has not been created, but developed*. . . .

As the human body has been formed by the extreme separation of the mucous mass, so must the human mind be a separation, a memberment, of *infusorial sensation*!

More than half a century passed after the *germ* of what is now popularly known as 'the Darwinian theory' had begun to captivate the scientific world, when the author of the *Vestiges of the Natural History of Creation* skilfully hatched a scheme, in which he sought to prove that the immediate ancestor of Adam was a chimpanzee, and his remote ancestor a maggot! In this book he asserts that—

It is now ascertained by microscopic research, that *the basis of all vegetable and animal substances* consists of nucleated cells, *i.e.* cells having granules within them. Nutriment is converted into these before being assimilated by the system. The tissues are formed from them. The ovum destined to become a new creature is originally only a cell with a contained granule.

Hence the learned author of the *Vestiges* concludes that—

The organization of man gradually passes through conditions generally resembling a *worm*, a fish, a reptile, a bird, and the lower mammalia before it attains its specific maturity!

I think it is possible that our author, in his anxiety to trace back man's ancestry to a 'worm,' may have thought he had Scripture authority for his theory, through a simple misunderstanding of the metaphor used by Job when he exclaims, 'I have said to corruption, Thou art my father: to the *worm*, Thou art my mother and my sister.' *Job* xxii. 14. Or it may be that he believes the tradition related by Latham in his *Varieties of Man*, which the *savans* among the natives of Tahiti entertain concerning the *Origin of Man*. They say that 'a heap of vegetables, in the act of rotting, gave rise to a number of *worms*, and *out of those worms men and women were at length developed*!'

This theory, so confidently put forward by the author of the *Vestiges*, after lying dormant for about a quarter of a century, has been revived by Professor Huxley, who has adopted it, and enlarged upon it in an Essay entitled *The Physical Basis of Life*, in which he says that his object is to lead his followers—

Through the territory of vital phenomena to the *materialistic slough* in which they find themselves now plunged, and then to point out the sole path by which, in my judgment, extrication is possible.

Professor Huxley's subsequent article in the *Fortnightly Review*, February 1869, on 'Protoplasm,' adopts the same line of argument; but whether he has succeeded in extricating his followers from the 'materialistic slough,' in which he admits them to be sunk, is for them to consider. For our own part, with Dr. Stirling's reply, *As regards Protoplasm*, before us, we are inclined to think that the learned Professor is in danger of plunging deeper in the slough of materialism than ever. Indeed he seems to admit as much, as I gather from a lecture which he recently delivered at the South Kensington Museum; for he frankly owned that his article in the *Fortnightly* was truly described as 'a frightful mass of infidelity and materialism.' And so in one of his *Lay Sermons* preached in London, January 7, 1866, he told his audience with candour which does him honour, that—

> Scepticism is the highest of duties, blind faith the one unpardonable sin. The man of science has learned to believe in justification, not by faith, but by verification.

But on the other hand, in a recent *Lecture on Education*, the same Professor, with unaccountable inconsistency, expressed a wish that—

> We had on the bench of bishops a man of the calibre of Butler of the *Analogy*, who, had he been now alive, could make *mincemeat of nine-tenths of the speculative heresies of the present day.*

There is, however, a possible solution of Professor Huxley's seeming paradox, by supposing his idea of the constituent parts of 'mincemeat' to be the same as that food-creating machine of which he speaks when he endeavours to define *Protoplasm* in his paper 'On the Physical Basis of Life,' by asking:—

> Why should 'vitality' hope for a better fate than the other 'itys' which have disappeared since Martinus Scriblerus accounted for the operation of the *meat*-jack by its inherent '*meat*-roasting quality,' and scorned the 'materialism' of those who explained the turning of the spit by a certain mechanism worked by the draught of the chimney?

Let us, however, briefly but seriously consider how Professor Huxley treats the subject of *Protoplasm*. After stating that the physical basis of life, or protoplasm, consists of oxygen, hydrogen, carbon, and nitrogen, and that the formation of organized beings from protoplasm is

equally the result of natural forces as the formation of water is from its constituents; and after comparing it to the 'semi-fluid' matter in the stem of a nettle belonging to the vegetable world, or to the 'colourless corpuscles' of the human blood in a state of marvellous activity, 'creeping about as if they were independent organisms,' he proceeds :—

> Thus a nucleated mass of protoplasm turns out to be what may be termed the structural unit of the human body. As a matter of fact, the body in its earliest state is a mere multiple of such units, *variously modified*!

And this the learned Professor calls science! When he enters upon a field of inquiry in which we necessarily ask at the outset for the reason of variety in species, or for the *cause* of difference between man and beast, he thinks he can satisfy his readers with the slipshod expression, 'variously modified!' This is the man who considers himself entitled to call 'the dogmas of theology baseless,' and 'the blunders of mathematicians of no practical consequence!' This is the *savant* who pronounces 'thought to be the result of molecular forces,' or, as he again calls it, 'the expression of the molecular changes!' From which we gather that the Huxleyan mode of reasoning out *Protoplasm* in the Transmutation of Species theory is by eating shellfish for supper, by which means, to use his own language, 'lobster is turned into man!' An argument of about as much force as if he had said, by feeding on eagles we could fly, or that vultures would speak by feeding on us, or a corn-field would possess the power of reason by being sown with human brains—the absurdity of which is only to be paralleled by an anecdote told of a nobleman, now deceased, who was the reverse of Juvenal's adage, *Mens sana in corpore sano*; for he employed his leisure hours by sowing mince-pies in his garden, fondly believing that he would thereby obtain a fine crop of the same sort to satisfy his cravings at Christmas-tide!

Thus, according to the Huxleyan hypothesis, *Protoplasm* is henceforth to account for *everything*; but the 'structural' design, the 'multiplying' power, the 'nucleating' energy, the 'modifying' principle, whether its nature, its origin,

its action, its conditions—all these are to be unexplained and unaccounted for!

Such is the mode by which Professor Huxley expects to pull his followers out of the 'materialistic slough' in which they are now in danger of being engulphed. Happy would it be for teacher and scholars alike if they could only accept Dr. Stirling's fine reply to such reasoning, from which the following passage is extracted:—

This universe is not an accidental cavity in which accidental dust has been accidentally swept into heaps for the accidental evolution of the majestic spectacle of organic and inorganic life. That majestic spectacle is a spectacle as plainly for the eye of reason as any diagram of the mathematician. That majestic spectacle could have been constructed, was constructed, *only in reason, for reason, and by reason.* From beyond Orion and the Pleiades, across the green hem of the earth up to the imperial personality of man, all, the farthest, the deadest, the dustiest, is for fusion in the invisible point of the single Ego—*which alone glorifies it. For* the subject, and on the model of the subject, all is made. Therefore it is that I cannot help believing that this nucleus itself, as an analogue of the subject, will yet be proved the most important and indispensable of all the cell-elements.

One step beyond 'in reason, for reason, and by reason,' and we are constrained to exclaim with the Apostle of old: 'Of Him, and through Him, and to Him are all things: to whom be glory for ever and ever.' And as our warrant for this step, may we not, must we not, adopt the inspired declaration of the Mosaic Cosmogony?—

So God created man in His own image; in the image of God created He him.

We have now to examine the theory of the most distinguished of these *savans*, who either ignore or impugn the authority of Scripture at the present day. Mr. Charles Darwin, grandson of the author of the *Botanic Garden*, may be regarded as essentially *the* authority *par excellence* of modern times in respect to the Origin of Man—a sort of central sun in the scientific world, around which all the lesser lights are now revolving. Yet we must begin by doing him an act of simple justice, by noticing that so confident is he in the truth of his hypothesis, that he thinks there is 'no good reason why the views given in this volume should shock the religious feelings of anyone.'[1]

[1] Darwin's *Origin of Species*, p. 567, 4th edit. And so Sir Charles

Let us then hear his theory as stated in his own expressive words:—

I believe that animals have descended at most from only four or five progenitors, and plants from an equal or lesser number. Analogy would lead me one step further, viz. to the belief that all animals and plants have descended from some one prototype. But analogy may be a deceitful guide. Nevertheless, all living things have much in common *in their chemical composition*, their germinal vesicles, their cellular structure, and their laws of growth and reproduction. Therefore I should infer from analogy, that probably *all the organic beings which have ever lived on this earth have descended from some one form* into which life was first breathed by the Creator.—*Origin of Species*, p. 484 of the 1st edit.

This admission of a Creator, however, for some unknown reason, has been removed from the place where it originally stood to a passage near the end. And I cannot help thinking that our learned naturalist, in advocating his theory of the 'one primordial form,' has a very serious omission in his argument: by not even suggesting where a created germ may be found; or how the first organic molecule came to exist before life was breathed into it; or how an 'innate tendency to variability' with which, as he declares, every variety is imbued, agrees with the fact that the offspring of any creature is more like its parents than any other beings.

Moreover, as Mr. Darwin's theory of *Man's Origin*, which we have just seen he traces back to the 'one primordial form,' *i.e.* to the primeval fungus, is made to rest partly upon all living things having much in common 'in their chemical composition,' it may be well to notice that there are certain facts of a chemical nature which point to an opposite direction, viz. in favour of the permanence of species. Thus, for example, the analysis of the chemist shows that the albumen of blood is different from that of the egg, and both differ from certain forms of albumen present in the fluids of the lower animals. The milk of different species of animals differs in composition, which is also true of the bile, saliva, gastric juices, and other secretions. So likewise in the crystalline form assumed by the material of which the red blood-corpuscles

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Lyell, in his *Antiquity of Man*, considers that there is nothing in the doctrine of variation and natural selection to weaken the foundations of Natural Theology.

are composed. This substance may be obtained in the form of beautiful crystals, which are not always of the same form even in closely allied species; *e.g.* in three members of the class *Rodentia*, viz. the rat, the guinea-pig, and the hampster, the crystalline substance assumes the very different forms of six-sided crystals in the first, tetrahedra in the second, and in the third oblique rhomboid-shaped crystals. Thus when such remarkable differences are observed in the chemical composition of animals closely allied, we have the strongest proof against the theory that all animal and vegetable life have a common parentage. And it may be fairly argued that if, in violation of this proof by analysis, we break down the barrier between the classes of animal and vegetable life, and regard every living creature as nothing better than an 'improved plant,' we only get into further difficulties as regards the vegetable world; for how could there have been seeds, if there had been no plants to seed them? And if we extend our thoughts as far back as the primeval fungus, still *that* must have had a *humus* from which to draw into its vessels the nourishment of its archetypal existence, and that humus must itself be a 'false mark' of a pre-existing generation.

Hence Sir Charles Lyell, in his *Principles of Geology*, declares that—

> The entire variation from the original type may usually be effected in a brief period of time, after which no further deviation can be obtained. *The intermixing distinct species is guarded against by the sterility of the mule offspring.* It appears that species have a real existence in Nature, and that each was endowed at the time of its creation with the attributes and organization by which it is now distinguished.

This doctrine of the sterility of hybrids is fatal to the Darwinian theory of man being an 'improved vegetable,' as it is to that other equally irrational hypothesis of his being only an 'improved ape.' For the law of Nature, as both Lyell and Pritchard have shown, decrees that creatures of every kind shall increase and multiply by *propagating their own species and not any other.*

In some instances hybrid plants have been made to reproduce either by blending them with the primitive type or with other hybrids. But this rare fertility has never become permanent, and according to Professor Lindley,

it has never exceeded the third generation. A similar law prevails in the animal creation, and its effects are, on a great scale, equally constant and uniform.

But Mr. Darwin has another theory in what is called *Natural Selection*, which he thinks may be sufficient to explain Man's Origin from the primeval fungus. Although he 'freely confesses,' to use his own words, that this theory, when applied to the formation of the eye, 'seems absurd in the highest possible degree,' he is not deterred from accounting for the enormous head in the *Cetacea* in the following singular way :—

I will give two or three instances of diversified and of changed habits in the individuals of the same species. When either case occurs it would be easy for *Natural Selection* to fit the animal, by some modification of its structure, for its changed habits, or exclusively for one of its several different habits. . . . In North America the black bear was seen by Hearne swimming for hours with widely open mouth ; thus catching, *almost like a whale*, insects in the water. [I see no difficulty in a race of bears being rendered by *Natural Selection* more and more aquatic in their structure and habits, with larger and larger mouths, *till a creature was produced as monstrous as a whale.*]—*Origin of Species*, pp. 183–6, 1st edit.

What are we to think of Mr. Darwin's opinion of his own theory, when we find that the portion of the above extract included in brackets was quietly excluded, without a word of apology or explanation, in all future editions after the first? Does it not afford proof of the truth of the late lamented Hugh Miller's remark, that 'Never yet was there a fancy *so wild and extravagant*, but there have been men bold enough to dignify it with the name of philosophy, and ingenious enough to find reasons for the propriety of the name'? (*The Old Red Sandstone*, chap. iii.)

Must we not therefore term it 'absurd in the highest possible degree,' according to Mr. Darwin's own words, to think that a bear 'lost at sea' could become by *Natural Selection*[1] in the course of time—say 10,000,000

[1] The late Professor Baden Powell was so captivated by this theory, that he once wrote :—'A work has now appeared by a naturalist of the most acknowledged authority, Mr. Darwin's masterly volume on *The Origin of Species* by the law of Natural Selection, which now substantiates on undeniable grounds the very principle so long denounced by the first naturalists—*the origination of new species by*

years—a very rudimentary whale? Or how, as it has been humorously said—

> A deer with a neck that is larger by half
> Than the rest of his family's—try not to laugh—
> By stretching and stretching becomes a giraffe!

Or how—

> A very tall pig with a very long nose
> Sends forth a proboscis quite down to his toes,
> And then by the name of an elephant goes!

But in order to prove his theory of *Natural Selection*, Mr. Darwin ought, as Professor Huxley admits in his *Lectures to Working Men*, 'to demonstrate the possibility of developing from a particular stock, by selective breeding, two forms which should be infertile with one another.' Now Mr. Darwin has not shown this, nor can he point to a single instance where different species under *Natural Selection* produce a new kind which will continue to breed together. We may therefore rebut all his arguments with the knowledge of these facts—that there are two fixed laws in nature against the possibility of his theory being true:—1st. The law of *avitism*, which limits variation by parental peculiarity; 2nd. The law of *hybridism*, which being in itself a limited confusion of nature, bears in itself a barrier to the extension of that confusion in the fact that hybrids cease to breed their like. If therefore a law could be found whereby 'transmutation of species,' either by Natural Selection or any other means, could be promoted, there is a law to prevent change of kind, and the one is incompatible with the other. And thus it is seen that Mr. Darwin's way of accounting for the *Origin of man* is not only, as he admits in one instance, very 'absurd,' but also, as I cannot but think, illogically erroneous and philosophically wrong 'in the highest possible degree.'

Mr. Darwin, however, has a large following on the other side of the Atlantic, whose opinions we must briefly consider, as they have been so ably expounded by the famous Andrew Jackson Davis, founder of the *Pantheon of*

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natural causes; a work which must soon bring about an entire revolution of opinion in favour of the grand principle of the self-evolving powers of nature.'—*Essays and Reviews*, p. 139.

Progress, as he calls it, a magnificent temple on the banks of the Hudson, which, in the comprehensive language of its architect, 'covers an immense field of beautiful conceptions, also boundless regions of psychological problems and of scientific discoveries innumerable,' and author of several voluminous works on *The Origin and Constitution of Man.*

Professor Davis, according to the custom of his country, speaks with greater freedom than most of our English *savans* on this interesting subject, for which he is deserving of great commendation. Thus in his *Principles of Nature* he teaches that *matter is the substance of everything in the universe*, and that it is a law of matter to produce its ultimate result, viz. mind. And as the first power of motion contained all forces known to exist, so did matter contain the specific properties to produce man, who is the most perfect combination of organised matter. There are only two existing principles: one, *the body*; the other, *the soul*; one, the Divine positive *mind*; the other, the *Univercœlum.* Man is a part of this great body of the Divine mind. He is a gland, or minute organ, *the earth being to him as a stomach.* Originally man was an *oyster*, from which he has progressed to his present condition; this oyster produced a *tadpole*, which was eventually transmuted into a *quadruped*, and subsequently into a *baboon.* This latter speedily became an *orang-outang*, which produced a negro, and the negro is the ancestor of the white man. The original colour of the human race was therefore *black*; subsequent nations became *brown*, the branches of these were *red*; from these sprang the *yellow*; and thence the *white.* Such is the exact pedigree of the human race, from an oyster to the white man, according to the instructive American philosophy of the present day.[1]

[1] Let it not be supposed that the American Professor stands alone in his opinion concerning the true origin of the human race; for our European *savans* are beginning to adopt the same cheerful view. Thus Dr. F. G. Bergmann, in his recent work entitled *Résumé d'Études d'Ontologie générale*, appears to have projected from his own consciousness the beings from which men are developed. Their name is *Anthropiskes*, an appropriate term for the male species of the 'strong-minded female;' and their original *habitat* was in Central Africa. They developed out of 'apes;' and a certain number of them, finding them-

Our learned Professor, however, considers that man is as yet only *half developed* compared with what he is to be. For there are six generations through which he has to pass before becoming a perfect mortal and fit to share the bliss of the seventh sphere. The author's experience of the planetary world from a personal visit, which he declares he was permitted to pay by means of spirit-power, enables him to assure us of the physical condition of those celestial beings. Speaking generally, he declares that the inhabitants of the planetary world, although belonging to the *genus homo*, are not as yet connected with ourselves. Those of Saturn are described as being 'morally and intellectually perfect,' while those of Jupiter, 'in size, symmetry, and beauty of form, exceed those of the earth's inhabitants, walking *like quadrupeds* by a modest desire to be seen only in an inclined posture, which has thus become an established position amongst them.' The people who dwell in the planet Mars 'are in a much more exalted state than the inhabitants of the earth, and their hair, instead of growing on their heads, envelopes their necks;' the Venusians are represented as 'a barbarous, savage, and giantlike community, much given to cannibalism,' whilst the Mercurians have a closer affinity to ourselves on account of the striking resemblance to the ape species in general and to the *orang-outang* in particular!

In another of his works the American philosopher, strange to say, seeks support for his opinion respecting the connection between man and beast on the authority of Scripture! For in his interpretation of Peter's vision, *Acts* x. 10–13, where St. Peter was commanded to kill and eat the specimens of the *Quadrumana* and *Reptilia* which descended from heaven, our author says:—

All this simply meant, 'Peter, thou needest not feel too exclusive, too partial, too aristocratic, too high-minded, and above the meanest of

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selves in favourable circumstances, developed into 'black men,' who became the parents of the families whence the brown, copper, yellow, and white races branched off. Dr. Bergmann, however, takes a mournful view of the coldness with which his views have been received on the Continent (unconscious, apparently, of the number of English and American philosophers who adopt them), but consoles himself with looking to the science of the future to do him justice.

thy fellow-men, nor yet above the little worm that crawls beneath thy feet, for behold, *thou art related to every four-footed beast and creeping thing that the Lord hath made*; acknowledge, therefore, thine universal relationship and sympathies, and be kind and lenient to everything that lives.' Too many, like Peter, shrink from *this new method of tracing out their genealogy and ancestral derivations*; but the time is fast approaching when mankind will feel their *oneness with nature*, and with nature's God, to the total annihilation of all narrow-mindedness and empty superficiality.—*The Grand Harmonia*, iii. p. 120.

There is a frankness and freshness in the opinions of this philosopher concerning *the Origin of Man*, which contrasts favourably with the confused state of mind under which some of the learned in England appear to be labouring. When we find Professor Lesley, another American *savant*, declaring that he sees 'sufficient evidence that man is *a developed monkey*,' we understand what he means. But when we seek to know the opinions of our English philosophers on the same subject, we are perplexed by the uncertain way in which they state them, as if they were afraid either to betray themselves by affirming too much, or else to let the world see that in reality they know so little. Thus, *e.g.*, it is tolerably certain that Professor Huxley is undecided whether to go all length with the Darwinites, and regard man as 'a well-developed mushroom,' or to take his stand beside the American *savans*, who have so skilfully worked out Lord Monboddo's original theory, and pronounced him to be only 'a developed monkey!' For although, in his *Evidence as to Man's Place in Nature*, Professor Huxley writes:—

> I am fully convinced that *Mr. Darwin's hypothesis*, if not precisely true, is as near an approximation to the truth as, for example, the Copernican hypothesis was to the true theory of the planetary motions——

on the other hand, in his Lecture *On the Fossil Remains of Man*, delivered in 1862, while asserting that—

> The difference between the highest and lowest races of men is greater than between the lowest man and the highest ape——

Professor Huxley expressed a hope that in due time there would be found some specimens of—

> Those lower forms which once bridged over *the gap* between man and some lower pithecoid creature sufficiently different to form another *genus* of primates, and sufficiently similar to constitute *the stepping-stone from the ape to some form of the Neanderthal Man.*

Professor Owen takes an entirely different view of this missing-link theory, which his brother professor so fondly hopes to find. For after the reading of a paper *On the Brain of a Microcephalic Female Idiot*, at a meeting of the Anthropological Society, he remarked it was possible that an idiot with an imperfectly developed brain might wander into some cave and there die, and in two or three years his bones might be imbedded in stalagmite, and when discovered, such a skull might be adduced as affording the *looked-for link* connecting man with the inferior animals; but the brain of such an idiot as the female whose skull was exhibited is distinctly different from that of the anthropoid apes, and the difference is *too wide to be bridged over by the skull of any creature yet discovered.* At that discussion Mr. Blake expressed his perfect agreement with the sound sense and good logic of Professor Owen, declaring that 'the wild theory of the development of man from the inferior animals was *directly opposed to all the facts and reasonings of physiology.*'

But as doctors proverbially differ, we find the missing-link theory strongly advocated by Professor Carl Vogt, who says in his *Lectures on Man*:—

> Twenty years ago fossil monkeys were unknown; now we have nearly a dozen. Who can tell but that in a few years we may know fifty? A year ago no intermediate form between *Semnopithecus* and *Macacus* was known; now we possess a whole skeleton. Who can assert that in ten, twenty, or fifty years we may not possess *intermediate forms between man and ape*? If the macaci of Senegal, the baboons on the Gambia, and the gibbons in Borneo could become developed into *anthropoid apes*, we cannot see why these different stocks should be denied *the further development into the human type*, and that only one stock should possess this privilege; in short, we cannot see why American races of men cannot be derived from American apes, Negroes from African apes, or Negritos, perhaps, from Asiatic apes!

On the other hand, the late Hugh Miller, in his *Testimony of the Rocks*, positively asserts that 'there are no intermediate species, and no connecting links,' between man and beast. And so Professor Phillips, in his address as President of the Geological Society, February 17, 1860, observes:—'No possible art or arrangement can present plants and animals in one continuous series from a lower to a higher type.'

The arguments against the anthropoid apes being this *missing link*, have been summed up by Dr. Pritchard as follows:—1st. The facial angle of the *ape tribe* averages from 42° to 50°. In *man*, from the Negro to the European, from 70° to 80°. 2nd. The antero-posterior diameter of the basis of the skull in the orang is very much longer than in man. 3rd. The position of the great occipital foramen—a feature most important as to the general structure and habits of the whole being—in *man* is situated immediately behind the middle transverse diameter; while in the *adult chimpanzee* it is in the middle of the posterior third part of the basis cranii. 4th. The far greater size and development of the bony palate in apes than in man. Lastly, the arms of the chimpanzee extend below the knee-joint, and of the orang they reach as far as the ankle-joint. (*Natural History of Man*, pp. 117, 130.)

I would suggest, however, for the consideration of those who are not satisfied with Dr. Pritchard's arguments, whether the supposed existing race of *Tailed Men* may not afford some clue to the *missing link* which some of our *savans* are evidently determined to find. Whether there have been such a race of creatures on this earth, let the following evidence decide.

John Struys, a Dutch traveller, who visited the isle of Formosa in the middle of the seventeenth century, relates that one of the savage islanders having killed one of the sailors, was captured after a desperate struggle, when—

> He was tied up to a stake, where he was kept for some hours before the time of execution arrived. It was then that I beheld what I never thought to see. *He had a tail more than a foot long*, covered with red hair, and very like that of a cow. When he saw the surprise which this discovery created, he informed us that his tail was the effect of climate, for that all the inhabitants of the southern side of the island were provided with like appendages.

A century later Lord Monboddo published his opinions on the subject, to which we have already alluded. Dr. Johnson is said to have rebutted his theory by observing:—

> Of a standing fact, Sir, there ought to be no controversy; if there are men with tails, catch a *homo caudatus*. It is a pity to see Lord Monboddo publish such notions as he has done. Other people have

strange notions, but they conceal them. If they have tails, they hide them; but Monboddo is as jealous of his tail as a squirrel.[1]

Yet so fully impressed were many with the truth of his tail-theory, that it was no uncommon sight to see maps, which were published at the end of the last century, having a portion of the world marked off as inhabited by 'tailed men' who were supposed to reside there.

In the *Essays* published at the same time by Francis Gosse, F.R.S., the author declares:—

> According to common report, there are *in Ireland* a few remaining descendants of the *people with tails*. To one of them (an old woman) John Cockle, Esq., offered a handsome sum of money for an ocular proof of this phenomenon. and on her refusal, attempted to satisfy his curiosity by force; a scuffle ensued, the old woman cried out, and brought two sturdy fellows (her grandsons) to her assistance, who beat him most cruelly, and laid an indictment against him for an assault on their grandmother, and it was not without considerable expense that the matter was accommodated.—*Essay* v. p. 19.

About twenty years ago it was commonly reported that between the Bight of Benin and Abyssinia there were tailed anthropophagi named by the natives *Niam-niams*, whom M. de Castelnau in 1851 thus describes:—

> They were sleeping in the sun: the Haoussas approached, and falling on them, massacred them to the last man. They had all of them *tails* forty centimetres long, from two to three in diameter. Among the corpses were those of several women, who were deformed in the same manner.

M. d'Abbadie, another Abyssinian traveller, writing in 1852, gallantly refutes his compatriot's assertion respecting the feminine caudal appendage, quoting the authority of an Abyssinian priest as saying:—

> At the distance of fifteen days' journey south of Herrar, is a place where *all the men have tails*, the length of a palm, covered with hair, and situated at the extremity of the spine. The females of that country are *very beautiful and tailless*. I have seen some fifteen of these people at Besberah, and I am positive that *the tail is natural!*

Dr. Wolff, the Jewish missionary, has improved upon the foregoing account, as in the second volume of his *Travels and Adventures*, published in 1861, he says:—

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[1] Dean Ramsay mentions in his *Reminiscences* that on one occasion, when Lord Monboddo wished to give precedence to his brother judge, Lord Kames, the latter drew back, saying, 'By no means, my Lord; you must walk first, in order that I may see your tail!'

There are men *and women* in Abyssinia *with tails like dogs and horses.* There are many known instances of this elongation of the caudal vertebra, as in the *Poonangs* of Borneo.

In order to confirm the truth or falsehood of this *tale*, Mr. Cameron, a *savant* of Calcutta, applied in 1869 to the Asiatic Society to assist him in the cost of an expedition to Borneo. For when at Sarawak, he received from traders who had visited the Kyan country the most definite account of this tailed race. They are said to be without clothes of any sort, and *to live in trees*, which reminds us of the *gorilla* described by Hanno 200 B.C., but which was considered a fabulous creature until about thirty years ago.

The most decisive testimony, however, in favour of the caudal appendage is that of Col. du Corbet, a French traveller, who in a report to the *French Academy of Science* gives the following account of what he himself had seen :—

When living at Mecca in 1842, and being intimate with an Emir, I spoke to him of the *Ghilane* race, and told him how much the Europeans doubted the existence of *men with tails.* In order to convince me of the reality of the species, the Emir ordered before me one of his slaves called *Bellal,* about thirty years of age, who had a tail, and who belonged to this tribe. On surveying this man I was thoroughly convinced. He had no beard, and his body was not hairy. He was very active and hardy; his height was about five feet. *His tail was more than three inches long, and almost as flexible as that of a monkey.*

Although Professor Huxley may not be satisfied with the *tailed men* of the present day affording proof of the 'missing link' between man and beast, he evidently thinks he has a clue to the problem (the solution of which he and his *confrères* appear to be as anxiously seeking as the alchemists did the secret of transmuting iron into gold) by quoting triumphantly a tradition current amongst the *natives* about the *Bight of Benin*, to the effect that the *chimpanzees* abounding there did *once* belong to their tribe, but were expelled for their filthy habits; the consequence of which was, that, not improving their natural propensities, they by degrees assumed a *beastlike* form in keeping with their mental condition. (*Man's Place in Nature*, p. 45.)

Notwithstanding the ample testimony which has been

adduced in favour of *tailed men and women* now alive, some of our *savans* declare it is simply impossible for a human being to have a tail, as the spinal vertebræ in man do not admit of elongation as in caudate animals. Nevertheless, if such be the conclusion of science, and the ideal missing link be not found where it ought to be, I venture to think that there is far greater proof in favour of a tailed race now existing on earth than of that darling theory so powerfully maintained in the present day that man is nothing more or less than a well-developed ape of an age it may be more than 9,000,000 years ago!

It is singular, to say the least, to contrast the credulity of scepticism on this point with the belief of the aborigines of New Zealand, who, according to what the missionary Marsden was informed by the native Duaterra, believed that three gods made the first man, and that the first woman was made out of man's ribs. Their general term for *bone* is 'Eve.' They have a tradition of the legend concerning the man in the moon, and that at some former period the serpent spoke with man's voice; that the world was originally under water; and they assign to each of their three gods his own peculiar part in giving to it its present form.

It must not, however, be supposed that all the philosophers are of one mind on such important subjects as the *Origin of Species* or the laws of *Reproduction* and *Natural Selection*. Some, indeed, like the late Dugald Stewart, have naturally argued that 'the transition to *Atheism* is not very wide from those representations of human nature which tend to assimilate to each other the faculties of man and beast;' since the advocates of near relationship between the two being unable to raise brutes to the level of man, with due consistency degrade man to the level of brutes in order to complete the symmetry of a scientific problem.

When these speculations were first started about two centuries ago, and maintained with the same pertinacity which they have been in our own day, they were stoutly opposed by a philosopher of that age in the following manner:—

Of a truth, vile epicurism and sensuality will make the soul of man so degenerate and blind, that he will not only be content to slide into brutish immorality, but please himself in this very opinion that *he is*

a real brute already, an ape or a baboon, and that the best of men are no better, saving that civilization and industrious education have made them appear in a more refined shape, and long inculcated precepts have been mistaken for cognate principles of cognate honesty and natural knowledge.—Henry Moore's *Conjectura Cabbalistica,* p. 175, A.D. 1662.

Nor is the testimony of one of the readiest wits of our age less decisive in condemnation of the wild speculations which have muddled the brains, as we must charitably conclude, of so many of our *savans* in the present day.

What, exclaimed Sydney Smith, has the shadow or mockery of faculties given to beasts to do with the immortality of the soul? It is no reason to say that because they partake in the slightest degree of our nature, they are entitled to *all* the privileges of our nature. I confess I have such a marked and decided contempt for the understanding of every baboon I have yet seen, I feel so sure the *blue ape without a tail* will never rival us in poetry, painting, and music, that I see no reason whatever why justice may not be done to the few tatters of understanding which they may really possess. I have sometimes felt a little uneasy at Exeter Change from contrasting the monkeys with the 'prentice boys who are teasing them; but a few pages of Locke, or a few lines of Milton, have always restored me to tranquillity, and convinced me that the superiority of man had nothing to fear.—*Elementary Sketches of Moral Philosophy, Lecture XVIII.*

The only serious argument which we happen to have met with on this subject is to be found in Dr. Adam Clarke's learned disquisition as to the *animal* which seduced our first parents in Paradise. The LXX. and the Authorised Version have adopted the word 'serpent,' which in the course of ages has become so imbedded in the national mind, that it seems something like 'heresy' to doubt it. Yet Dr. Clarke has brought forward some powerful arguments for the opposite view. He points out that the word נחש *nachish* has various meanings in Scripture, such as 'enchanter,' 'fetters of brass,' 'filthiness,' 'a serpent,' 'a whale,' and 'a crocodile.' From the similarity of its root with the Arabic word *chanas* or *khanâs*, which signifies both 'an ape' and 'the devil,' he considers 'that a creature of the *ape* or *orang-outang* kind is here intended.' And he sums up the Biblical narrative of the temptation in the following words:—

In this account we find:—1st. That whatever this *Nachish* was, he stood at the *head* of all inferior animals for wisdom and understanding. 2nd. That he *walked erect,* for this is necessarily implied in his

punishment—*on thy belly—i.e.* on all fours[1] *shalt thou go.* 3rd. That he was *endued with the gift of speech*, for a conversation is here related between him and the woman. 4th. That he was also endued with *the gift of reason*, for we find him reasoning and disputing with Eve. 5th. That these things were *common to this creature*, the woman, no doubt, having often seen him walk erect, talk, and reason, and therefore she testifies *no kind of surprise*, when he accosts her in the language related in the text.—Clarke's *Comment. Genesis* iii.

Hence Dr. Adam Clarke concludes that it was *an ape* or an *orang-outang* which talked with Eve in Paradise; and if this be a true conclusion, I would suggest the possibility of this creature in his original condition belonging to the race which forms the 'missing link' between man and beast.

Connected with this branch of *Anthropology* our *savans* are greatly at issue among themselves concerning the 'irrepressible' negro, as he was once termed, before the abolition of slavery; *e.g.* Mr. Carter Blake pronounces the negro and the European to be *distinct species of men.* Professor Davis of America considers the negro to be the *direct and immediate ancestor of the white man.* The late Dr. Hunt, President of the *Anthropological* Society, declared that—

> An anatomist with the *negro* and *orang-outang* before him, after a careful comparison, would say, perhaps, that Nature herself had been puzzled where to place them, and had finally compromised the matter by giving them an exactly equal inclination to the form and attitude of each other.

This last opinion, however, has received the strongest condemnation from his *confrère* Professor Huxley, who seems at a loss to find words sufficiently strong in reprobation of what appears to the outside world as harmless a vagary as any which the learned Professor has himself upheld. For when Sir Charles Lyell showed Professor Huxley a cast of the *Neanderthal skull*, which had been exhibited at a meeting of German *savans* at Bonn, A.D.

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[1] Dr. Adam Clarke is scarcely warranted in interpreting the expression 'on thy belly' to be the same as 'on all fours,' as the Hebrew *gah-on*, 'belly,' is a peculiar word, applicable only to those reptiles which move in that way; and is used in *Leviticus* xi. 42 to distinguish the two orders of *Ophidia* and *Saura*, 'snakes and lizards,' as the Jews were forbidden to eat *both*, viz. 'Whatsoever goeth upon the *belly*, and whatsoever goeth upon *all four*, or whatsoever hath more feet among all creeping things that creep upon the earth.'

1857, and which then elicited many grave doubts as to its being human or not, Professor Huxley at once remarked 'that it was the most *ape-like skull* he had ever beheld;' and though in his lecture *On Fossil Remains*, delivered in 1862, he terms it 'the Neanderthal *man*,' we prefer his *first* conclusion, as the proverb 'second thoughts are best' is not always true, and therefore we believe it to be without doubt the skull of some singularly intelligent ape of the family *Simiadæ*, which was gifted with rather more brains than his contemporaries, and whose skull had received a fuller development thereby.

There is an old legend respecting another skull found in the catacombs of Rome, whose apocryphal history, with the aid of a little imagination, may throw light on the subject before us. Tradition reports the skull to have belonged to an early Christian martyr, all doubts having been set at rest by the skull informing its discoverers in an audible manner of its name and age, as well as the cause of its owner's death.[1] Let us then suppose a similar miraculous interposition in the case of the Neanderthal skull, and that with a restored jaw, which is wanting in the original, it had been prompted to declare to the curious *savans* at Bonn its antecedents both of age and species, and had improved the occasion by a 'free handling' of some of the scientific hypotheses afloat in the present day. It might then have addressed its distinguished family circle[2] somewhat as follows:—

'Gentlemen, Relatives, and Friends,—During my long retirement, now extending over a course of many thousand

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[1] Alphonsus Mendoza mentions in his *Controv. Theolog.*, Quæst. vi. Scholast. § 5, another instance of a dead man's skull uttering a certain speech to Macarius the Egyptian anchorite, and Renatus Laurentius improves upon the fact by assuring us that '*without doubt it was an angel that did speak in this skull.*'

[2] Dr. J. Bernard Davis says, in vol. i. of the *Anthropological Review*, that 'the form of the Neanderthal skull is the result of a *synostosis*, and not to be regarded as a race-character.' If this newly-coined word *synostosis*, or ossification of the sutures, be derived from the Greek *συνουσία*, which signifies 'a meeting of friends' or 'family party' according to the lexicons, possibly Dr. Davis meant to imply that the *Neanderthal skull* acquired its 'ape-like' shape from its converse with such a large family, partly of relations, in the scientific circle at Bonn?

years, I have witnessed with extreme pleasure in these latter days the wonderful advance of science in all its ramifications, and especially in that which relates to the human race, for the Grecian philosopher Epicurus taught you of old—

We are a sufficient theme for contemplation the one for the other—

and the English poet Pope seems to have been of the same opinion when he wrote :—

> Know then thyself, presume not God to scan,
> The proper study of mankind is man——

though the original idea appears to have belonged to the Egyptians, as the Γνῶθι σεαυτὸν inscription on their Isidian temple sufficiently shows.

'In this present enlightened age of reason and progress it may be safely asserted that *the schoolmaster is indeed abroad*, and I am sanguine enough to indulge the pleasing hope that his travels have not yet come to an end. During the last century I well recollect the interest which the celebrated Lord Monboddo excited, when he proclaimed with remarkable consistency the grand discovery that men once possessed *tails like apes*, which had in course of time disappeared through the necessities of their domestic institutions. The envious critics of the day inflicted so cruelly "forty stripes save one," after the manner of the Jews, upon the originator of this brilliant idea, that he was compelled to bow in silent grief to those literary tyrants; and the theory has been allowed to slumber during the last 100 years, until revived under happier auspices and in more enlightened days by yourselves, Gentlemen, whom I have the honour to see around me.

'I welcome with extreme satisfaction the deep researches which so many of you are now making respecting the *Antiquity and Origin* of that compound being MAN. I think, with Professor Waitz, that it is quite immaterial whether the antiquity of man be reckoned at 35,000 or 10,000,000 years, or any possible number between the two. I have heard of some attempts made by learned Germans, like the Chevalier Bunsen, to estimate man's age by the number of years required for pottery sinking a certain depth in the alluvial soil of Egypt, but fear there is some

truth in the charge brought against them by their enemies, that they have stuck fast in the Nile mud, and that their ideas are no better than the dreamy nebulosities of used-up scientific speculation.[1]

'I am a good deal puzzled at the great difference of opinion existing amongst many distinguished philosophers concerning the exact *origin* of your illustrious race; and am at present quite undecided whether to accept the Huxleyan theory that man is nothing more or less than a well-developed *monkey*, and that the missing link will turn up in due time if you have only patience to wait for it; or the Darwinian hypothesis, which traces man's pedigree back to the vegetable world, and regards the *genus homo* as sprung from the loud-smelling *fungus*—whether your ancestor is to be found in *one* species of the monkey tribe, as Lord Monboddo supposed, or in *three*, as your own Dr. Carl Vogt contends, or whether he must not be looked for according to the great spiritualist of the far West, Professor Davis, in that delicious mollusc the native *oyster*—whether to side with the author of the *Vestiges*, who has pronounced in favour of the *worm*, or that other alternative which Swedenborg has adopted from the Grecian philosophy, viz. the *mundane egg*, as Aristotle in his *De Gente Animalium* says, "If men and animals have sprung from earth, they must have done so in one of two ways: either they crawled out as *worms* or came out as *eggs*"—whether to adopt the hypothesis of Lamarck, who contends that all living things sprang from a solitary homogeneous *jelly*, or, lastly, that of Oken, who in his *Physico-Philosophy* declares the current creed of the *savans* of his time, that man and beast have alike sprung from a minute organic point, not equal in size to the ten millionth part of the smallest pin's head.

'With such conflicting opinions, so confidently set forth by such celebrities, I confess my inability to decide which of you bears the palm; as the old Romans used to say:—

Palmam qui meruit, ferat——

[1] De Quincey, in the Preface to his *Essays*, protests 'against the habit, prevalent through the last fifty years, of yielding extravagant precedency to German critics, as if better and more philosophic, *because more cloudy*, than our own.

but for politeness sake I will suppose them all to be equally true, and, with your leave, I would add, perhaps all equally false.

'I have heard with great regret of the unhappy dispute between the two learned Professors Owen and Huxley as to whether the hind paws of apes are to be called *hands* or *feet*; as well as the fiery discussion concerning that part of the brain called the *hippocampus minor*; and since Owen treads the old paths while Huxley advocates an entirely opposite view, I think it will not be unfair to either party if we regard the brain of the former as that of a *man*, while the latter (let me say it tenderly and without the slightest desire of giving offence) must be content with that of his *ancestral ape!* For, as another English Professor has wittily remarked in his charming story of the *Water Babies* respecting the Origin of Man, "Nothing is to be depended on but the great *hippopotamus* test. If you have a *hippopotamus major* in your brain, you are no ape, though you had four hands, no feet, and were more apish than the apes of all aperies. But if a *hippopotamus major* is ever discovered in one single ape's brain, nothing will save your great, great, great, &c., greater, greatest grandmother from having been an ape too."

'It is a matter of much interest in this "talking" age to see so many gifted speakers investigating the subject of the *Origin of Speech*; but whether the "bow-wow" method by imitation, or the "pooh-pooh" theory of interjection, is nearest the truth, I frankly own I cannot say; though at the same time I am persuaded of the truth of the wise king's saying that "in making of books," and may I not also add, "in much talking, there is no end."

'I have read with great wonder the voluminous works of the Biblical critics, from the time of Astruc, the founder of that "out-of-all-reason" school of Scripture exegesis, to those of the many hermeneutical writers in the present day. And I cannot think, to name the two most distinguished of this school during the eighteenth and nineteenth centuries, that the *mythic* theory which Volney applied to Christ, and which Bishop Colenso, after having been duly instructed by the old Zulu, now applies to Moses—thus relegating the founders of the two great religions of

ancient and modern times to the position occupied by Hercules and Romulus of yore, or by Pope Joan and William Tell in the present age—is deserving of much attention. I would, however, remind you, that, though the distinguished author of the *Principles of Nature* asserts, "Matter is the substance of *everything* in the universe," other equally eminent authorities have doubted even the existence of matter itself, upon the principle of the old adage, "What is matter? *Never* mind. What is mind? *No* matter." Even so it may prove in the long run that man is altogether a *myth*, and that the human race has never existed at all!

'Thus much, Gentlemen, I have ventured to remark on some of the stirring questions which are now dividing the attention of your learned world; and if you will permit me to add one more word in parting, I would say that if you wish to know my own private opinions respecting man being a mushroom, an oyster, a worm, or an ape-descended animal, I frankly own myself incompetent to solve so difficult a problem. Recollecting the well-known line of one of the British poets—

Fools rush in where angels fear to tread—

I would ask you to excuse me from giving judgment in so weighty a cause. For myself, I will say this much, that although the actions of many of your species in the present day warrant the strongest suspicions of some mysterious affinity to certain animals such as the *goose*, the *ass*, the *ape*, and the *bear*—for your own Goethe, in his masterpiece, *Faust*,[1] teaches "There is nothing more horrible than man; he is filthy like a *pig*; brutal like an *ox*; ridiculous like an *ape*; passionate like a *lion*; and venomous like a *snake*. He is a compound of all bestiality" —I can only assure you, on my honour, that when I walked your earth, before Adam delved or Eve span, it

[1] Goethe's great poem was conceived when a young student at Strasburg, and completed sixty-two years later, in 1832, the year of his death. In it is contained the essence of rationalism, since Faust is represented as *throwing off all authority and entering on free inquiry*. Johann Faust was a real character, a necromancer of Suabia and contemporary of Melanchthon, whose 'sorceries' were celebrated throughout Europe in the sixteenth century.

was as a very humble *chimpanzee*; and although I was the propagator of many little chimpanzees, I have no reason to think that they in their turn acted differently from their aged parent. For, as the illustrious Bacon used to say, "Perpetuity by generation is common to beasts; but memory, merit, and noble works are proper to men." And the same great philosopher went so far as to declare that "it addeth deformity to an ape to be so like a man" —a sentiment which you would do well to consider with the gravest attention. And in another place, when commenting on the boasted wisdom of man, he skilfully compares it "to the wisdom of *rats*, who always leave a house before it falls; and to that of the *fox*, which thrusts out the *badger* who digged and made room for him; and to that of *crocodiles*, that shed tears when they would devour." And so, Gentlemen, if I may no longer call you Relatives and Friends, I have the honour to bid you, with feelings of the deepest respect, in the language of the poet—

Farewell!
A long farewell to all my greatness!'

With such lively testimony from the vigorous brain of the Neanderthal skull on some of the leading questions of the day, as entertained by the *savans* of modern times, we turn to see how far their opinions may be considered as the *original* product of their prolific minds, or whether they must not be regarded as mere plagiarisms from the philosophers of old, who, though unblessed with a revelation from on high, were doubtless in their day what is called 'acknowledged authorities' in all that relates to the *Origin and Antiquity of Man*. By this means we shall discover how far our 'advanced thinkers' of the present age have any claim to the title of originality in their speculations on the subject.

If this shall prove to be the case, they will have the consolation of knowing that one of the most distinguished of our English philosophers has frankly admitted that it must be always so. William Robert Grove, President of the British Association in 1866, in his admirable work on *The Correlation of Physical Forces*, has well said:—

The more extended our research becomes, the more we find that *knowledge* is a thing of slow progression, that the very notions which

appear to ourselves new have arisen, though perhaps in an indirect manner, from *successive modifications of traditional opinions.* Each word we utter, each word we think, has in it the vestiges—is in itself the impress, of antecedent words and thoughts. As each material form, could we rightly read it, is a book, containing in itself the past history of the world, so, different though our philosophy may now appear to be from that of our progenitors, *it is but theirs added to or subtracted from,* transmitted drop by drop through the filter of antecedent, as ours will be through that of subsequent ages. The relic is to the past as the germ is to the future. . . . In all phenomena the more closely they are investigated, the more are we convinced that, humanly speaking, neither matter nor force can be created or annihilated, and that an essential cause is unattainable—*Causation is the will; Creation the act of God.*

It is satisfactory to be able to quote the opinion of this distinguished President of the British Association in 1866, because his successor in the chair at the Norwich meeting, two years later, who has not inaptly been termed, in order to distinguish him from his more illustrious namesake, 'the injudicious Hooker,' gave utterance to such questionable speculations in his inaugural address, as to cause the veteran Professor Sedgwick to express his regret that his health prevented him from raising his protest against some of the statements therein contained.[1] It would be surely better for the advancement of science, if some of these hasty speculators possessed the wisdom of the founders of the British Association, like Brewster, and Sabine, and Airy, and Faraday, and abstained from dogmatically asserting their incredible and unphilosophical theories.

Respecting the multifarious and divergent theories which have been put forth by various scientific speculators in order to account for the *Origin of Man*, all of which appear to be in opposition to the plain statements of Scripture, I cannot close this chapter without adducing the testimony of the Rev. Walter Mitchell, who has elo-

[1] Although Dr. Hooker, in his inaugural address, made a complimentary reference to an article by Dr. Hannah in the *Contemporary Review*, who had there enumerated a long list of educated preachers of the Gospel who have 'adorned science by their writings, and religion by their lives,' he had the singularly bad taste to make use of his position in the presidential chair for insinuating that the great majority of the clergy held widely different views, without offering anything like proof in support of his unfounded charge.

quently said in his speech at the *Victoria Institute*, April 5, 1869:—

Nowhere yet have we perceived in nature any instance in which the inorganic world has been able to acquire that power, without coming in contact with that power previously existing. We may go back for an almost infinite series, but we must come to the time when that power was first given, and then the Bible reveals to us one great fact, not only that there is a Creator of all things, but a Sustainer of all things. The modern so-called philosophy, which is endeavouring as far as it can to ignore the Creator, to push Him farther back, and to hide from us the knowledge of the wisdom which we can read in His works; that same philosophy is totally and entirely ignorant of this, that all these things required not only an Almighty Creator, but an Almighty Sustainer; and the Bible shows us how all these things are perpetually under the eye of the Heavenly Father. Two sparrows may be sold for a farthing, but not one of them can fall to the ground without His knowledge. That is told to me as a proof of that Heavenly Father's power, and care, and love for me; and I protest against this so-called philosophy not only as *unsound*, not only as *unscientific*, as I most thoroughly believe it to be, but also as *ungodly*, denying God's sustaining power, and it would also deny, if it could, His creating power. That is the reason why we show these scientific gentlemen that there is not one single fact brought forward to prove that there is no such thing as life, or that there is not a power in organic nature which is not to be found in inorganic nature. Man has the greatest manifestation of God's power in his own body—manifestations which altogether transcend his intellect. No man could make his own eye, or his own heart, or his own nervous system. The whole of the vital actions of man's body depend on a higher wisdom than he possesses. But man has something else totally and entirely distinct from all this vital power and force. This vital power and force he possesses in common with the plant and with the animal. But his higher mental powers and reason are totally and entirely distinct from his vital powers, though they may be bound up with them; and they have been given to him by his Creator, as the sign and mark of his having been created in the image of that Creator.

THE ORIGIN OF MAN ACCORDING TO ANCIENT THEORIES.

CHAPTER IX.

We have now to consider what was the belief of the ancient philosophers respecting the *Origin of Man*; and I think we shall find evidence enough to show that the modern speculations on this interesting subject, which have been considered in the preceding chapter, so far from being original, appear to be something very like plagiarisms from the ideas of those old *savans*, who, being without a revelation from on high, had much to be said in their favour for their curious notions on this important point.

We have already seen (Chap. III.), in noticing the Cosmogony of the *Phœnicians*, that man's origin is there traced to the mundane egg—an idea which seems to have found great favour with Swedenborg in the last century, as it has with Professor Huxley in the present day. Sanconiatho, the Phœnician historian, who declares it was by the mundane egg that the *Zophaseim*, *i.e.* 'the star-gazers' or ancient astrologers, came into the world, has another string to his bow, and teaches that *the first two mortal men*, respectively termed *Æon* and *Protogonus*, were born of the marriage between *Colpias* and *Baau*, the former being the 'wind,' and the latter meaning 'Night.' (Eusebius, *Præp. Evang.* i. 10.)

Berosus, in his account of the *Chaldæan* creed respecting the Origin of Man, says:—

There was a woman named *Omoroca*,[1] which in the Chaldæan language signifies *Thalatth*, whom Belus, the chief deity, cut asunder, and

[1] Bunsen contends that the *Thalatth* of the Chaldees can only signify 'the egg-producing;' and that, according to Professor Dietrich, *Omoroca* has the same meaning, for 'it contains the word EGG by dividing it into (a) *Mar-kaia*; *i.e.* the inmate of the egg.'—*Egypt's Place in Universal History*, iv. 150.

of one half of her formed the earth, and the other the heavens. Then Belus took off his own head, upon which the other gods mixed the blood as it gushed out with the earth, and from thence were formed *men*. On this account it is that they are *rational*, and partake of divine knowledge.—Eusebius, *Chronicon*, v. 8.

The *Egyptians* appear to have held much the same creed as the Phœnicians respecting the mundane egg, as in a temple at Philæ on the Nile, one of their chief deities, *Phthah-Sokari-Osiris*, is represented simply with the skull-cap in a sitting posture on a potter's wheel, and forming *an egg*, with the following inscription beneath :—

Osiris, the father of the beginnings, creating *the egg* of the sun and moon, first of the gods of the upper world.

And in a hieratic papyrus, now at Berlin, it is said that 'gods and men came out of his mouth.' (Lepsius' *Denkmäler*, vi. 117.) Hence, in the *Egyptian Ritual*, chap. liv., containing an account of 'How a Person receives Breath in Hades,' he is represented as saying :—

O Tum ! give me the delicious breath of thy nostril. I am *the egg* of the Great Goose *Seb*. I grow, it grows; I live, it lives in turn, stimulating the breath. . . . Osiris has opened his mouth and unclosed his eyes.

The Egyptians were also believers in *metempsychosis*, or, as it would now be termed in Darwinian language, 'the Transmutation theory'—the outcome of 'Natural Selection.' They believed that the soul, on its departure from the body, passed into the form of that animal which happened to be born at the same time. Afterwards it passes from one animal to another, until it goes through the forms of all creatures, such as birds, beasts, and fishes; after which it again enters a human frame and is born anew, it may be as a man or woman. Such is Herodotus' account of the Egyptian Creed, to which he adds: 'The whole period of this transmigration is computed at 3,000 years.' In a papyrus containing an old Egyptian calender, the following direction concerning the doctrine of transmigration has been discovered :—

On the 12th of the month *Choiak*, no one is permitted to go out of doors, for on that day the transformation of Osiris into the bird Wennu took place.

Wilkinson, in his *Ancient Egyptians*, shows that on the tombs of Thebes we have the usual representations of the

deceased on his passage to the region of the dead, in which Osiris the judge is seated with Anubis, holding the scales to weigh the actions of the departed, who is condemned to return to earth *frequently under the form of a pig.*

Gibbon has made a singular mistake respecting the doctrine of *Transmigration* as held by the Egyptians, for he asserts, on the authority of Herodotus, that—

> The doctrine of the *resurrection* was first entertained by the Egyptians, and their mummies were embalmed, and their pyramids constructed to preserve the ancient *mansion* of the soul during a period of 3,000 years.—*Decline and Fall,* chap. l.

Whereas Herodotus does not say a word about the resurrection of the *body*, as Gibbon, by using the word 'mansion,' would have his readers believe, but relates exclusively the opinions of the Egyptians respecting the transmigration of the *soul.* Mr. Goodwin seems to have made a similar mistake, when declaring that 'the doctrine of the immortality of the soul and of its reunion with the body was in full vogue during the whole ritual system.' (*Fraser's Magazine*, Feb. 1865, p. 189.) Perhaps, however, both Gibbon and Goodwin intended to use the terms 'resurrection' and 'immortality of the soul' in a non-natural sense?

In the case of the *Troglodytes*, a nomad tribe of North Africa, not very far from Egypt, we have some intimation of the ancients having discovered something like the 'missing link' between man and beast. For they are described by Diodorus as 'beings *half men* and *half beast*,' chiefly *Cynocephali*, *i.e.* 'human bodies with dogs' heads;' from which Homer evidently takes the idea expressed in his account of Achilles reproaching Atrides as 'a wine-bibber, with the face of a dog and the heart of a stag.'

The account which the Hindoos give of their double god *Arahanari*, or *Viraj*, from which the souls of all mankind are said to be emanations, sufficiently reveal their ideas respecting the Origin of the human race.

They say that the primeval Being experienced no delight; therefore man delights not when alone. He wished the existence of another, and was immediately transformed into the species of both *man and woman in one.* Then he caused *this species to fall in twain*, and thus become husband and wife, and from this union

sprang the present race of mankind. The wife reflected, How can my husband have produced me from himself? I will now assume a disguise. She became a cow, he became a bull, and the issue were kine. She was transformed into a ewe, and he into a ram, and thus sheep were created. In this manner were all existing species created, even to the ants and smallest insects. (*Asiatic Researches*, vol. xiii. p. 441.)

The Jewish Rabbis, whose ideas on the subject originated during the Babylonian Captivity, appear to have held similar notions respecting the *androgynous* nature of Adam when first created. Thus Aben Ezra, Rabbi Solomon, Manasseh Ben Israel, &c., teach that Adam was created in front and Eve behind. The author of *Rabboth* declares, in addition, that this compound being had two faces. They observe that the word supposed to mean 'rib' denotes a *side*, or *moiety* of the body of Adam, as Moses elsewhere uses the word. Hence what God took from Adam was not his rib, but his female side or moiety, which was attached to that primitive human being, who was originally created both male and female in one. (Kidder's *Demons*, pt. iii. p. 121.)

The *Carthagenians* likewise appear to have got hold of the 'missing link' when Hanno made his memorable attempt in the sixth century B.C. to sail round the Cape of Good Hope. For he thus describes an island on which his party landed as—

> Full of savage people, the greater part of whom were *women*, whose bodies were covered with hair, and whom our interpreters called GORILLAS. Although we pursued the men, we could not catch them, as they fled from us, escaping over precipices. Three women, however, were taken; but they could not be prevailed upon to accompany us. So having killed them, we flayed their bodies, and brought their skins with us to Carthage.—*The Periplus of Hanno*, apud Cory, Anc. Frag. p. 203.

In Southern Africa, amongst the *Kaffirs*, there exists a tradition respecting the *Origin of Man* to this effect. That the 'Great Great,' or 'First Exister,' as they term him, split a gigantic *reed, out of which proceeded a man and a woman*, their cattle, birds, insects, trees, water, fire, &c. Afterwards a chameleon was commissioned to go and teach mankind to live, while at the same time a lizard was despatched with a message of death. Un-

fortunately the chameleon was tempted to stop by the way to taste some berries; this enabled the lizard to arrive first, the message of death was delivered, and thus man became mortal.

We pass now to the opinions entertained by the two most cultivated nations of the ancient world respecting the *Origin of Man*. The GREEKS naturally come first in order; and the opinion of Socrates, as confessedly the wisest among them, properly demands our gravest attention. Thus in the *Phædo*, or *the Immortality of the Soul*, after boasting that he was 'not sprung from an *oak* nor from a *rock*, as Homer[1] had represented was the case with some men,' Socrates evidently adopts the *Transmutation theory*, by supposing that the wicked, after wandering their allotted term in the world of spirits, are 'turned into asses and brutes of that kind;' while the souls of the good, after their return from the world of spirits, he considered would—

> Again migrate into a corresponding peaceable kind of animal, such as bees, or wasps, or ants, or even into the same human species again, and *from these become moderate men.*—§ 70.

What a contrast does this teaching concerning the Immortality of the Soul by the wisest of those philosophers, who were without a revelation, present to that immortality which Scripture reveals as belonging to the tree of life, no leaf of which can perish or decay, as this idea is beautifully worked out by St. Augustine in his *De Civitate Dei*, xx. 1.

In a similar strain to that of his master, Plato describes the *Transmutation theory*—how wicked men in the first generation were changed into women for their punishment during the second; and thence passed into the tribe of birds with feathers in place of hair, which were 'fashioned from men not actually vicious, but over-curious concerning

[1] The Homeric idea of man having developed either from vegetables or minerals, resembles the view subsequently adopted by Lamarck, as explained in Lyell's *Principles of Geology*:—'I have only space for exhibiting a small part of the entire process by which, after a countless succession of generations, *a small gelatinous body is transformed into an oak or an ape*; passing at once to the last grand step by which the *orang-outang* is made slowly to attain the attributes and dignity of *man*.'

things on high.' The race of wild animals with feet were made 'from men who had made no use of philosophy,' and because they avoided intellectual pursuits, 'their legs and heads became fixed earthwards, as most suited to their nature; hence arose the race of *quadrupeds* and *centipedes*.' The lowest tribe of *fishes* and *oysters* are represented as sprung from the greatest dunces among men; which reverses the order adopted by our modern *savans*, who consider the *oyster* the progenitor of man. Hence argues the Grecian sage:—

After this manner, both formerly and now, animals migrate into each other, experiencing their changes through either the loss or acquisition of intellect or folly.—*The Timæus*, § 73.

It is, however, in the *Symposium*, or 'Banquet,' that Plato's most original idea of the origin of the human race under its present condition is to be found; which is related somewhat as follows:—

In ancient times, before men grew desperately wicked, and heaven alarmed for its own safety, there was no such thing known as difference of sex. Every living man was originally both *male* and *female* alike; perfect in form and faculty and in spirit. The exact shape of this being was a *round ball of flesh* with four hands, four feet, two faces, and one brain.[1] During the sexless period, this creature was a pattern of manly strength and inconceivable speed. He could fell an ox easier than Milo, and when he wished to take a gallop he had only to thrust out his four legs and arms, and roll along the road like a wheel with eight spokes which had lost its tire. But these wonderful beings of no gender got too proud, and (like the post-diluvians on the plains of Shinar) attempted to scale the heavens, and eject the gods from their lofty thrones. Jupiter, in his anger, shot down his thunderbolts upon this sexless race, cleaving them through the head downwards; parting each round ball of flesh into two halves, and separating the male side from the female. Great was the consternation at this sudden loss of power, the agony of cutting two sides asunder being intense. The man shorn of his rotundity could no longer wrestle with the lion, nor outstrip the fleetness of the deer. Each part of divided man was compelled now to stand upon two legs—a feat of much skill, the art of which he was slow to learn and swift to lose. When, formerly, he was the owner of four legs, he could either walk or run, sleep or wake, play or rest upon them. On his two legs he could neither roll nor sleep, neither could he stand very long or walk very far. All his movements became slow, and requiring much muscular labour and pain. Every step he attempted to take only showed him

[1] Plato appears to have taken this idea from the Chaldæan Cosmogony, for an account of which, see p. 91.

his loss of original power; and that the gods had laid upon him a burden too heavy to bear. And this daily suffering in the flesh was not the worst. Besides having to pass his life in trying to stand on two legs, man found to his sorrow that he was parted from his 'better half,' whom he regarded as his dearer self. When the rebel rotundities were cleft in twain, the two halves were scattered by divine vengeance in different parts of the earth. Each wounded fragment sought its fellow in the world, but the gods took care that much of the search should be made in vain. This home-thrust of celestial vengeance broke down man's spirit entirely. Alone in the cold world, and perched up in the air on two legs only, what could he do in the midst of his grief? Once, indeed, in his agony, he felt tempted to cry out against the gods on account of his grievous loss, but Jupiter quickly let him know that if he would not keep quiet on these green fields below, but would again storm the stars above, he should be split once more from the crown downwards, so that in future he would have to stand on one leg alone. Man listened to these words in an agony of fright, and submitted without any more provoking the wrath of Jove. All that was left to man in his wretched condition, beyond the recollection of his former bliss, was a yearning hope of being one day permitted to rejoin his better half. Thus each man became a searcher; though only a few could find their true mates. Most men had to seek them long, and myriads never found them in the flesh at all. Two halves, strangers to each other, occasionally met in the crowd, and for awhile thought themselves true pairs, but time and experience proved they were mistaken, and then the wearied spirits flew from each other in a rage. When anyone, by the favour of the gods, fell in with his proper half, a true marriage of the spirit instantly took place. To this longing desire of the cleft parts for union has been given the name of Love, which love delighteth in the presence and converse of the party loved. And so, adds the sage in conclusion by way of moral, let us take care not to offend the gods, lest we get our noses slit down, and have for the future to stand on one leg alone!

Nor were the *Latins* behind their Grecian rivals in a due appreciation of the *Transmutation theory*, if the testimony of one of their own poets may be relied on. The following picture drawn by Ovid in his *Metamorphoses*, of the changes which a sacred hierophant represents himself to have undergone, proves that one of the many speculations in modern days respecting the *Origin of Man* had its counterpart amongst the *savans* of the ancient world:—

A second time was I formed. I have been a blue *salmon*, a dog, a stag, a roebuck in the mountains, a stock of a tree, a spade, an axe in the head, a pin in a forceps for a year and a half, a cock variegated with white, a horse, a buck of yellow hue in the act of feeding. I have been a grain vegetating on a hill, where the reaper placed me in a smoky recess, that I might be compelled to yield freely my corn when subject to tribulation. I was received by a hen with red fangs,

and remained nine nights an infant in her womb. I have been in Hades, returning to my former state. I have been an offering before the sovereign. I have died. I have revived; and conspicuous with my ivy-branch, I have been a leader, and by my bounty I became poor.

It is singular to see how the Darwinian theory of *Transmutation* was acknowledged by our *British* ancestors, as we may judge from the history of Taliessen, a famous Welsh bard of the sixth century, who represents himself as having passed through many changes during his course on earth, and to have been successively 'a serpent, a wild ass, a brick, and a crane,' until he finally settled down in life as a country gentleman, a distinguished musician, and a very decided opponent of the Church of Rome.

And so amongst our brethren of the *Emerald Isle*, there was in the olden times a firm belief in the *Transmutation theory*, which is so much in vogue amongst the learned of the present day. Thus Giraldus Cambriensis, who flourished in the twelfth century, records several interesting tales current amongst the Irish in his time on this subject. One represented all the ante-diluvian inhabitants of Ireland to have been swept away by the Noachian flood, save a single person named 'Fintan,' who was saved by being transformed into a *salmon* (as was the case with Ovid's metamorphosed hierophant), and swimming about until the waters subsided, after which he resumed his human form. Whence it has been supposed that this may account for the excellent salmon-fisheries which abound in Ireland until this day. Another tale represents one 'Ruanus,' the sole individual saved after the war with the giants:—

To have lived for a vast number of years, during which time he was transmuted into the form of various animals, until at length, about the year A.D. 527, he passed from the *condition of a salmon into that of a man*, and appeared in the world as the son of Carell, King of Ulster.

To return, however, to the *Latins*, Horace describes the opinions entertained by their most distinguished philosophers respecting *the Origin of Language* amongst mortals, which must be very satisfactory to our modern speculators on the way by which man became possessed of the power of speech; whether they may be advocates of the 'bow-wow' theory, or its rival the 'pooh-pooh,' is

not of much consequence, since Sir Charles Lyell frankly avows that 'the picture of transmutation given by the Roman poet *accords exactly with the train of thought* which the modern doctrine of development has encouraged.'

Thus, then, Horace sings in his *Satires*:—

> When the first mortals crawling 'rose to birth
> *Speechless* and wretched from their mother earth,
> For caves and acorns then the food of life,
> With nails and fists, they held a bloodless strife;
> But soon improved, with clubs they bolder fought,
> And various arms which sad experience wrought,
> Till words to fix the wandering voice were found
> And names impressed a meaning on the sound.
>
> Lib. i. *Sat.* iii.

We may, however, discover the impression of the human mind as it rose to greater improvements in the sarcasm of Pliny on the kind of beings which the intellectual world in general, and his own Roman countrymen in particular, had set up and adored as gods, which he specifies as '*men and animals*, things most improper, of all shapes, colours, and ages; among these some winged, some lame, some *coming out of eggs*, and even deities guilty of robberies and crimes.'

And so Philostratus, who followed Pliny about a century later, in his *Life of Apollonius of Tyana*, particularly mentions among other curious discoveries of the *savans* of that age, 'the existence of *monkeys equal to men*; animals with a *human head* and a lion's body, women half white and half black,' &c.—all of which shows the ideas which were then entertained by the learned Romans respecting the origin of the human race.

About four years ago, the following advertisement appeared in the public papers relating to *Apollonius of Tyana*, which seems to show what lengths our scientific speculators are prepared to go in their opposition to THE TRUTH OF THE BIBLE:—

> A new Book for *Advanced Thinkers.* Apollonius of Tyana, the Pagan or false Christ of the Third Century. An Essay by Albert Reville, D.D., friend and literary associate of Professor Renan, and Pastor of the Walloon Church in Rotterdam. Authorized Translation.

The advertisement was accompanied by the following puff, in which the writer asserted that—

The principal events in the Life of Apollonius are *almost identical with the Gospel narrative.* Apollonius is born in a mysterious way, about the same time as Christ. Like Him, he goes through a period of preparation; afterwards comes a passion, then a resurrection, and an ascension. In many other respects the parallel is equally extraordinary!

What must the public think when they hear that so far from there being a shadow of truth in this statement, the only two authors who mention the said Apollonius of Tyana, prior to the time when Philostratus wrote his ideal and legendary life, of which there are some choice specimens in the text, are *Lucian* and *Apuleius*, who speak of him as a pretended magician or conjuror, like Caliogstero of modern times, who trifled with popular credulity, just as Dr. Reville appears to be doing in the present day. Such is the credulousness of the 'advanced thinkers,' who regard themselves as the only persons capable of instructing this progressive age!

Nor are the *Eastern* nations much behind the Greek and Latin philosophers in their traditions respecting the *Origin of Man.* According to the popular legends of the country, the learned Thibetians believe that Central Asia was formerly peopled by 'animals and demons.' In course of time the supreme Deity sent to Thibet *the king of the monkeys*, who there led the life of a hermit; all his time was taken up in religious devotion; his chief desire being to get absorbed into nonentity according to the ideas of the straitest sect of Buddhism. Just as he was on the point of attaining that much-coveted end, a female *maqua*, or demon, appeared before him, and proposed to marry him without delay.

'I am unable to comply,' replied the royal ape, 'as all my time is occupied in my religious duties.'

'Duties!' exclaimed the *maqua*; 'what good can they do you?'

'Why, I hope soon to be absorbed, and thus get rid of my existence altogether.'

'But surely it will be much pleasanter to live with me;' saying which the charming demon smiled, and the aged monarch, touched by such delicate attentions, wept and smiled likewise. Thus they became united, and from this happy pair sprang the *veritable ancestor of the human*

race, the Thibetian Adam—a romantic tale indeed, which may possibly have suggested to Byron his simile respecting the human race, as he describes him in *Childe Harold* on this wise:—

> Man!
> Thou pendulum betwixt a smile and tear!

If it were possible to treat the theory seriously of considering man as nothing better than an 'improved ape,' it would be sufficient to quote the saying of Bunsen, who justly observes:—

> No length of time can create a man out of a monkey, because it can never happen; for it is a logical contradiction to suppose the growth of *reason* out of its opposite, *instinct*.—*Egypt's Place in Universal History*, iv. 54.

Man stands apart from animals in form as well as in reason, *i.e.* in mode of action as well as in faith, intellect, thought, moral feeling, personal habits, social relation, and religious life. The ground on which we estimate the difference in mental and moral character between man and man, is that which marks the broad distinction between man and mere animals; for, as Dr. Moore truly asks, 'who but dreamers would talk of chimpanzees with enlightened consciences, gorillas of fine genius, or monkeys of good morals?'

> Thought makes the man, and wanting that, the ape
> Looks more inhuman in his human shape;
> But thou, O man! a man shall never see
> Till in thyself thou see Divinity.

Respecting the various opinions of the *Origin of Man* now current amongst the *savans* of modern times—whether he came forth from *an egg*, or wriggled into existence as *a worm*; whether his ancestry is to be traced to the *animal*, *vegetable*, or *mineral* world; whether he is anything more than a well-developed mushroom, or descended from an ape; or which of the various theories that have been put forth in order to solve this problem under the high-sounding titles of 'The Development or Transmutation Theory,' 'Laws of Growth and Reproduction,' 'Natural Selection,' &c. &c., is most probable—the evidence which has been already adduced, and much

more could be added if necessary, is sufficient to prove that not one of these various theories, of which modern science is now making so much, can be fairly termed *original*, as they appear one and all in the dreamy reveries of those ancient philosophers; who had some excuse for their wild ideas on the matter, inasmuch as they were without a revelation from God.

It is a melancholy proof of the infidelity inherent in us all to see how some of the over-confident teachers of the age find no difficulty in believing that both the European and the Negro are descended from apes, while they regard as incredible the common origin of the *black* and the white from a single pair like Adam and Eve. Happy would it be for those who find such extraordinary pleasure in seeking to prove man's connection with the monkey tribe, if they took as much pains to realise the force of the maxim carved on the heathen temple of old, which has been so well illustrated by Coleridge in one of his later poems:—

> Γνῶθι σεαυτόν! and is this the prime,
> And heaven-sprung adage of the olden time!
> Say, canst thou make thyself? Learn first that trade;
> Haply thou may'st know what thyself had made.
> What hast thou, Man, that thou dar'st call thy own?
> What is there in thee, Man, that can be known?
> Dark fluxion, all unfixable by thought,
> A phantom dim of past and future wrought,
> Vain sister of the worm—life, death, soul, clod—
> Ignore thyself, and strive to know thy God!

Great as are the intellectual differences which distinguish the various races of mankind, they surely ought not to be classed with the far wider difference which separates him from the beasts that perish; and it is very difficult to understand the feeling which pretends to be unable, as it has been said, 'to discriminate between the psychical phenomena of a Bushman and a chimpanzee.' Probably there has never been anything in the whole range of thought since the beginning of the world so extravagant or so degrading to the intellectual perceptions, as this attempt of the 'professedly wise' to reduce immortal man to the level of the speechless, soulless, unreasoning brute. There are a class of sceptics in the present day who seem to take pleasure in doing all they can to lessen the broad

distinction which separates man and brute by an impassable decree. Misled to a false conclusion by the prolificness of Nature, they have idealised a chain of existence between the vegetable and animal kingdoms, so as to enable the lowest sign of vitality to rise by an almost imperceptible gradation from the primeval point of chaos up to the reflection of the Divine image in the person of man. But it is an abuse of terms to call this philosophy, which can contemplate man as an ape-descended animal, reared in barbarism, and destined in the end only to make manure for the soil from which he sprung. For if, as Professor Huxley alleges, there is less difference between the highest ape and the lowest savage than between the savage and the most improved man, to make the analogy perfect, it ought also to be true that the lowest savage is no more capable of improvement than the orang-outang or the fierce baboon. But as Archbishop Sumner, in his *Records of Creation*, truly observes:—

> Animals are born what they are intended to remain. Nature has bestowed upon them a certain rank, and limited the extent of their capacity by *an impassable decree.* Man she has empowered and obliged to become the artificer of his own rank in the scale of beings by the peculiar gift of improvable reason.

When Hallam observed, in the introduction to his *Literature of Europe*—

> If man was made in the image of God, he was also made in the image of an ape.[1] The framework of the body of him who has weighed the stars, and made the lightning his slave, approaches to that of the speechless brute who wanders in the forest of Sumatra. Thus standing on the frontier-land between animal and angelic natures, what wonder that he should partake of both?—

he makes a very serious omission in neglecting to notice the broad distinction which separates man from the ape by an impassable gulf in the several particulars of morality, religion, and improvable reason, and which Bacon has so well defined in his *Essay on Truth*:—

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[1] Dr. Moore observes on this saying of Hallam, that 'it is not true; man is not formed to reflect the ape, and is less ape-like the more he is man. But the body is not the man, and it is the human body which resembles in some slight degree the body of the ape; the man himself, in spirit, will, and thought, is capable of reflecting the character of his Maker. The ape-likeness dies; the moral image is immortal.'—*Man's Place in Creation*, p. 141.

The first creature of God, he says, in the work of the days, was the light of the sense; *the last was the light of reason*; and his Sabbath-work ever since is the illumination of his Spirit. First He breathed light upon the face of the matter or chaos; then He breathed light into the face of man; and still He breatheth and inspireth light into the face of his chosen.

Strip man of the attributes of speech, of moral and religious endowments, of the power of progressive and improvable reason; deny him the possession of an immortal soul, and he may justly be described as little better than *an ape*. But regard him, as he is, enriched with all these divinely-derived faculties, and he becomes not only equal to an angel, but, as St. Peter teaches, 'partaking' of the nature of *God Himself*.

We do well, therefore, to remember that a due reverence for the work of the Almighty, especially in the creation of man, is at the root of all great physical discovery, as it is the basis of all true wisdom. And although Darwin's theory of 'Natural Selection,' as the true mode of accounting for the *Origin of Man*, is a decided improvement upon the speculations of Lamarck and Oken, still, as we believe it to be illogical, or, to use his own words, 'absurd in the highest possible degree,' we cannot but regard it as a vain attempt to avoid acknowledging that God created all living things, each 'after their kind' as Scripture teaches, and with power to produce their like 'in body, soul, and spirit,' according to St. Paul in his Epistle to the Thessalonians. Cicero, without a revelation from God, must have had a truer conception of *Man's Origin* than Mr. Darwin, when he wrote :—

Man is not chiselled out of the *rock*, nor hewn out of an *oak*; for he has a body, and he has a soul; the one is actuated by intellect, the other by the senses.—*Quæst. Acad.* iv. 31.

When Darwin, then, asks concerning the infinite variety of the Creator's works, which are set in such orderly unity on all sides, and contends in favour of all things springing from 'one primordial form,' and then being gradually developed into man as their reasonable head, we can point him to the manifest superabundance of God's goodness, and remind him of the deep philosophy contained in the words of the Psalmist: 'All thy works praise Thee, O God, and thy saints give thanks unto Thee.' For it is a part of the

duty belonging to redeemed man to collect the inarticulate praises of the material creation, and to pay them with unconscious homage into the treasury of Almighty God.

Let us, however, note in brief what some of those, who have proved their claim to the title of Philosophers in the highest sense of the term, have said on this subject:—

The gradation in form between man and the other animals, said the late Professor Whewell in his *Address to the Geological Society*, is but a slight and unimportant feature in contemplating the great subject of *Man's Origin*. Even if we had not revelation to guide us, it would be most unphilosophical to attempt to trace back the history of man, without taking into account the most remarkable facts in his nature—the facts of civilization, arts, government, speech, his traditions, his internal wants, his intellectual, moral, and religious constitution. If we will attempt such a retrospect, we must look at all these things as evidence of the origin and end of man's being; and when we do thus comprehend in one view the whole of the argument, it is impossible for us to arrive at an origin homogeneous with the present order of things. On this point the geologist may therefore be well content to close the volume of the earth's physical history, and open that divine record which has for its subject the moral and religious nature of man.

In a similar manner the illustrious Sedgwick, in his *Studies of the University*, teaches:—

A study of the Newtonian Philosophy, as affecting our moral powers and capacities, does not terminate in mere negations. It teaches us to see the finger of God in all things animate and inanimate, and gives us an exalted conception of his attributes, placing before us the clearest proof of their reality; and so prepares, or ought to prepare, the mind for the reception of that higher illumination which brings the rebellious faculties into obedience to the Divine will.

And so replies M. Quatrefages, in his *Rambles of a Naturalist*, to the usual reasons of the rationalistic school for rejecting revelation in the present day:—

I saw one fact in Natural History linking itself to other facts; I felt one thought awaken other thoughts; and this mutual reaction between observation and intelligence was the source of unspeakable enjoyment. . . . When ascending to the origin of all these harmonies, I found that the Eternal power was the *source* whence this admirable order sprang—when, through marvel to marvel, my thoughts rose from creation to the Creator, it was from the very depths of my soul that I adored Him in his works, and united with Geoffroy de St.-Hilaire in the cry of *Glory be to God!*

Would that all our modern theorists were satisfied with such sound philosophy as we find in the above. For then

would they own how many subjects there are beyond the power of science or reason to discover, and notably that concerning the *Origin of Man*, which could only be made known to us by revelation from on high.

Let us, then, ever remember that all the greatest truths which it is necessary for man to know and believe have been taught him by revelation, and not by science. What science could never have discovered, and what it can never controvert, man has received by direct revelation. And the more we reflect on the subject of *Man's Origin* and all concerning him—his strange nature—the anomalies which he presents—the knowledge of his power to do good and his unwillingness to do it—

Video meliora proboque,
Deteriora sequor——

we ask, but we ask in vain, What philosophy has ever been able to account for all these things? None whatever. But the whole subject is revealed to us in the simple narrative of Scripture—how man was originally created in the image of God, and how he lost it through the fall. Place side by side these two statements—the infidel theory that man is nothing better than a well-developed ape, and the Biblical statement that he was created after the image and likeness of God; the one based on the testimony of Revelation, and the other on the mere conjecture of questionable Science—and it will surely approve itself to the intelligent mind that on such a subject science has no evidence to offer which can for a moment be compared with the proof afforded in the Bible.

It is true that the fall has darkened our reason, but it has not destroyed it. There is light enough, as Pascal has pointed out, for those whose sincere wish is to see, and darkness enough to confound those of an opposite aim. We encounter objections to our faith, some of which it may be difficult to answer in consequence of our ignorance, but these are outweighed by a vast preponderance of proofs, and proofs drawn from our knowledge in the opposite scale. Concerning the evidence which we already possess, it has been well said, 'If it were greater, the Gospel would cease to be a faith, and if it were less, the Gospel would become a superstition. If it were more,

there would be no probation for the heart, and if less, no grappling-point for the reason.' But alas! what a bad influence do the passions often exercise upon the judgment! How is the voice of reason drowned in the cry of impetuous desires! To what absurdity will not the understanding assent when the will has determined upon their advocacy! How little way can truth make with the intellect when there is something in its character which opposes the inclination! It has been happily remarked that Athens was but the rudiments of Paradise, and an Aristotle or a Socrates only the rubbish of Adam.

Dryden has forcibly expressed this idea in the following nervous lines:—

Dim as the borrowed beams of Moon and Stars
To lonely, weary, wandering travellers,
Is reason to the soul; and as on high
These glittering lights discover but the sky,
Not light us higher, so reason's feeble ray
But guides us upwards to a better day.
And as those nightly tapers disappear
When day's bright lord ascends the hemisphere,
So, pale grows reason in religious light,
So sinks and so dissolves in supernatural night.
Some few, whose lamps shone brighter, have been led
From cause to cause to Nature's secret head,
And found that one first principle must be.
But what or who that universal He,
Whether some soul encompassing this ball,
Unmade, unmoved, yet making, moving all,
Of various atoms' interfering dance,
Leaped into form, the noble work of chance,
Or this great all was from Eternity,
Not ev'n the stagirite himself could see;
And Epicurus guessed as well as he,
As blindly groped they for a future state,
As rashly judged of Providence and Fate.

* * * * * * *

Thus anxious thoughts in endless circles roll
Without a centre where to fix the soul—
In this wild maze their vain endeavours end,
How can the less the greater comprehend?
Or finite reason reach infinity?
For what could fathom God were more than He.

All scientific interpretations will ever be mistakes where the student has not sought to know the mind of the Great Creator in whatever He has made, or has ignored the only Book which can teach authoritatively on the

subject. To conceive of man at all to be, as Scripture describes him, 'body, soul, and spirit,' we must ever view him as the direct work of an Omnipotent Being, and as the mental and moral image and reflection of his Maker. It is so now in all right-minded men who acknowledge the supremacy of God's Word, and must have been so from the beginning. As Sir Thomas Browne, in his *Religio Medici*, has finely said:—

> While I study to find out how I am a little world, I find myself something more than the great one. There is surely a piece of divinity within me. There is something which was before the elements, and which owes no homage to the sun. Nature as well as Scripture tells me that *I am the image of God.*

And if in the image of God, no longer can it be said, as Hallam has so unphilosophically asserted, that he was 'made in the image of an ape;' for it is the living soul which contains the principle of immortal life, and which connects us with the great Spirit Creator, and not the perishing body. We feel that we breathe not air only, but spirit, which unites us to the life of God; for human-soul-life, when fully realised, is not mere animal effort and enjoyment, but a sense of communion and fellowship in life and will with the source of all good. Hence an old writer justly says:—

> As God applies Himself to all creatures without dividing His unity, or weakening His power; for He gives light with the sun, He burneth with the fire, He refresheth with the water, and He brings forth fruit with the trees; so is the soul dispersed in the body and penetrates all the parts thereof; she is noble in the hand as in the heart; and, though applying herself to the disposition of the organs, she speaks by the mouth, sees by the eyes, and hears with the ears, yet she is but one spirit in her essence; and in the different functions her unity is not divided nor her power weakened.—Sennault *On the Use of the Passions,* translated by Henry Earl of Monmouth, 1649.

With regard to those ancient philosophers who were compelled to grope their way in the dark assisted by reason alone, and unaided with light from above, we can appreciate their difficulties and make due allowance for their mistakes in the search after truth, and very creditable it is to their perseverance that they discovered as much as they have done when, to adopt the language of St. Paul, 'seeking the Lord if haply they might feel after

Him and find Him, though He be not far from every one of us.'

The same, however, cannot be said of their successors in the present day, whose rejection of all Scripture authority not only betrays the infidelity of their speculations, but places them in that category which has received so stern and so deserved a reproof from the great Apostle to the Gentiles, in language as applicable to the boasting *savans* of the nineteenth century as it was to the learned heathen when the Gospel was first preached to mankind.

The wrath of God is revealed from Heaven against all who hold the truth in unrighteousness. Because that which may be known of God is manifest in them; for God hath shewed it unto them. For the invisible things of Him from the creation of the world are clearly seen, being understood by the things that are made, even his eternal power and Godhead, *so that they are without excuse.* Because that, when they knew God, they glorified Him not as God, neither were thankful; but *became vain in their imaginations, and their foolish heart was darkened. Professing themselves to be wise, they became fools,* and changed the truth of God into a lie, and worshipped and served the creature more than the Creator, who is blessed for ever. Amen. (*Romans* i. 18–25.)

SCIENCE IN SCRIPTURE.

CHAPTER X.

HITHERTO our evidence concerning the TRUTH OF THE BIBLE has been chiefly on the negative side of the question; *i.e.* we have endeavoured to meet the arguments adduced by those who either ignore or reject the authority of Scripture on the two subjects of the *Mosaic Cosmogony* and the *Origin of Man*.

Our future course will be of a more pleasant kind. For our investigation of the subject will lead us to see how accurately certain scientific matters are incidentally referred to in Holy Writ, and what the skill of man has at length discovered to be the case after so many years of research and toil. This alone would be sufficient to prove that the Bible is a revelation from God, and that the sacred writers spake no otherwise than 'as they were moved by the Holy Ghost.'

Although I believe that a careful examination, in the original languages, of all the passages of Scripture bearing upon science would establish the supernatural accuracy of its phraseology, yet it is not, and never has been, pretended that the Bible is a manual of instruction on scientific subjects, such as are to be found in popular works of that nature in the present day. All I contend for is, that when scientific subjects are mentioned they are related in a manner easy to be understood by those to whom they were originally addressed, as a lecturer on astronomy would naturally employ the terms 'sunrise' and 'sunset,' though technically speaking there is no such thing—or they are so described in the Bible that anyone moderately acquainted with Hebrew may be enabled to see their harmony with true science; while it is evident, from our knowledge of past history, that the writers

themselves were not acquainted with the truths which they were inspired to tell.

I propose, therefore, in this chapter, to bring forward various examples from Scripture, where it will be seen that such is the case. As a reply has been already offered to Mr. Goodwin's attack upon the *Mosaic Cosmogony*, it will not be again necessary to show how far the sacred Record on that point and the discoveries of science harmonise with each other.

There is one subject, however, connected with the Mosaic narrative which may be suitably noticed here, though it bears rather upon prophecy than upon any distinct element of science. *E.g. Genesis* i. 26 mentions that when God promised dominion over fish, flesh, and fowl, He added likewise, 'over all the earth,' including thereby both land and sea; but dominion over *the air* itself was not promised him, and apparently, by its name having been omitted, was withheld from him. Now it is scarcely necessary to remind our readers that whereas man has had dominion over land and sea from the beginning, it is evident that he has never acquired this over *the air*. It is true that about a century ago man discovered a mode of ascending a certain height into the air by means of balloons, and then of descending, sometimes in safety, often at the sacrifice of life. But after all, with the exception of Mr. Glaisher's interesting experiments on behalf of science, what practical good has this been to the community at large? The answer is, None whatever!

History records many attempts to obtain 'dominion' over the air previous to the invention of balloons, but with even less success. In the twelfth century, a monk of Malmesbury is said to have flown from a steeple, and to have broken his bones in consequence, though he boasted he would have quite succeeded if he had only possessed a broad tail of feathers! And two centuries later Roger Bacon reports that a man flew from the top of a hill at Bologna to the river Reno so successfully, that he was neither killed nor drowned. But the Holy Inquisition stepping in, and deeming him in league with Satan, burnt him for his pains. When balloons first appeared in the last century, the 'advanced thinkers' of that age were so sanguine of man's coming triumph over the air, that

Dr. Darwin, grandfather of the distinguished Naturalist of that name, sang *Io Triumphe* in the following strains:—

> Soon shall thy arm unconquered *steam* afar,
> Draw the slow barge, and drive the rapid car;
> *Or on wide waving wings expanded bear*
> *The flying chariot through the streams of air*!

There is but one way of accounting for the rapidity with which the discovery of steam-power was successfully applied to locomotion by land and sea, contrasted with the innumerable attempts and co-equal failures extended over so many ages on the part of man to make himself a pathway through the air; no such permission has been conceded to man by Him who is Lord of all. About thirty years ago it was confidently assumed that aerial machines were coming into use, and that railways would soon be superseded. Not only were drawings made of them and extensively circulated, but the public papers gave a swimming account of Professor G.'s attempt in Scotland[1] to promote aerial navigation. All the particulars were so minutely detailed, even to his fall into the sea, and being saved by a passing steamer, that many were taken in, until time proved that the initial letter of the Professor's name harmonised with that of *gull*, and that the whole thing was a hoax.

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[1] It was on Lake Dalswinton in Scotland that the first *steamboat*, A.D. 1788, appeared, about twenty years *before* the American engineer Fulton introduced it, amid the jeers of his countrymen, on the Hudson River. They predicted his certain failure, just as the French *savans* (whom Buonaparte had commissioned to report on the practicability of the scheme, which the said Fulton had laid before him in 1804 of transporting his army to England without caring for wind or tide) pronounced it 'visionary, impracticable, and foolish.' Yet Fulton's theory has proved one of the greatest practical triumphs of the age, and a great contrast to another impossible plan, which five years later was proposed to the emperor with the same object in view, to be effected this time by aerial navigation. On October 28, 1809, General Clarke, Minister of War, submitted to Napoleon the plan of a person named L'Homond, designated as 'ex-chief of the battalion of aeronauts,' for making a descent on England by means of 100 balloons of 100 mètres' diameter each, the car of which could contain 1,000 men with provisions for ten days, two pieces of cannon with ammunition, twenty-five horses, and fuel for the balloons! The emperor wrote a few words on the margin, ordering the plan to be sent to M. Monge the celebrated mathematician, 'to see if it were worth while to make so great an experiment!'

In A.D. 1863, two French *savans*, *MM. Nadar* and *De la Landelle*, announced that they had made a machine for aerial navigation, but I believe nothing has yet been heard of its initial flight.

Three years later it was confidently stated that *M. Alexandre Chevalier*, a well-known aeronaut, was about to cross the Atlantic in a balloon, which he expected to cross in three days and three nights, but the day for starting has been indefinitely postponed.

The *Peuple français* of December 1869 says:—

> M. S—— of Montmorency has solved the problem of aerial navigation, by constructing a machine which can be guided through the air as readily as a cab on land, and by means of which he confidently expects to go from Paris to Marseilles in four hours.

So much for European expectations, not one of which has as yet been fulfilled. But we have perpetual rumours of a like nature from the American Continent, assuring us of Brother Jonathan's determination to pay us a spring visit by means of aerial navigation. The *New York Herald*, as far back as July 1859, gave a flaming description of an aerial ship, which was then being constructed to cross the Atlantic, winding up by assuring the world that—

> It will revolutionise all the old ideas of travelling, and the steamship of to-day will be to the *air-ship of the future* what the stage-coach of bygone days is to the rail-car of the present. The balloon will be finished in a few weeks, and it is contemplated to *start some time in October.*

Twelve Octobers have come and gone since these words were penned, but the arrival of this stranger from the far West has not yet been announced.

The *San Francisco Times* of ten years' later date, viz. July 5, 1869, notwithstanding the proverbial sickness of heart dependent upon hope so oft deferred, is sanguine enough to assure the public that the *Aerial Steam Navigation Company* have at length succeeded in perfecting a machine which '*in three weeks' time*' will positively convey any of the aspiring shareholders, who prefer that mode of transit to the old paths, in their voyages to the mother country. But though twelve months, in place of 'three weeks,' have glided by since the boast was made,

we may still ask, though without much prospect of an affirmative reply,—'Sister Anne, sister Anne, is anyone coming?'[1] But why this delay? Why has not the skill and power of man overcome the difficulties which surround aerial navigation, when he has overcome so many others of apparently greater amount? The natural reply is that God has not thought fit to give man dominion over the air, as He has over the land and sea, which He revealed to Moses between 3,000 and 4,000 years ago.

Leviticus xi. 6 relates that 'the hare' was prohibited to the Israelites 'because he cheweth the cud, but divideth not the hoof;' which has given Bishop Colenso occasion to accuse the Scriptures of telling a lie; and therefore he concludes they cannot be inspired of God. But was the Bishop right in his inference? Let us consider. The Hebrew word *arnebath*, which is rendered 'hare' in the A.V., occurs but twice in the Bible—in the place already named, and again in Deuteronomy xiv. 7, when it is associated in both instances with the 'camel' and the 'coney,' or *shaphan*, which is usually understood as the 'rabbit,' but which the LXX. have variously rendered as 'hedgehog' and 'hare,' showing that there is considerable doubt respecting the exact meaning of *arnebath*, and therefore we may justly protest against charging the Bible with scientific inaccuracy, where the rendering of the Hebrew name of the animal in question was evidently doubtful, long before Natural History was cultivated as a science.

The *arnebath* of Scripture was in all probability the same as the *Hyrax Syriacus*, an animal abundant in Syria, and corresponding in all its habits to the Biblical description of the *shaphan*, 'coney,' save in chewing the

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[1] It seems hardly credible, but the newspaper report of a recent meeting of the *Aeronautical Society* shows that there are some members disposed to believe that man is to become a flying animal, just as much as certain *savans* regard him as an ape-descended animal. Mr. Walter Clure contended that flight would be the *ultimate* triumph of the aeronauts, and suggested that men should be taught to fly as youths were taught to swim in Germany, viz. by being suspended by a rope, when they could in safety make experiments with an artificial flying apparatus, and was quite willing to offer himself in the interests of science as a rotatory pendulum bob!

cud. Sir Gardner Wilkinson, speaking of this animal in his *Ancient Egyptians*, says :—

It was probably the *shaphan* of the Bible, as Bruce has remarked, and that enterprising traveller is perfectly correct in placing it amongst *ruminating animals.*

Hence Professor Owen, in reply to a letter on the subject, writes :—

The stomach of the *hyrax* is a simple bag, as in the horse and rhinoceros, with a partial lining of cuticle, as in them. It has not the valvular construction of the entry as in the horse, and therefore regurgitation is possible. Man, with a similar stomach, occasionally ruminates, and this rare abnormal act may occur in a hyrax, but it has not the ruminating organisation.

But even supposing by the term *arnebath* Moses meant not the *hyrax* of Syria, but an animal in all respects like the English hare, as Bishop Colenso anxiously assumes in order to convict Scripture of scientific incorrectness, will this aid him in his onslaught upon the Bible? Not a whit. The hare, we all know, is not a *ruminant* animal with four stomachs, but a *rodent* of the same class as the squirrel, rat, and a great number of the smaller quadrupeds. But the belief that it chewed the cud arose from its habit of constantly grinding its teeth and moving its jaw, as those animals do which chew the cud. Hence Aristotle truly observes:—

All animals with many stomachs (*i.e.* ruminating animals) have what is called a *coagulum* or runnet, and so likewise *the hare,* which has but one stomach.—*Hist. Anim.* iii. 21.

Moses speaks of animals according to appearances, and not with the precision of a comparative anatomist, and the intention of the inspired writer was evidently to show that the reason why the hare was prohibited, though it apparently chewed the cud, was because it did 'not divide the hoof.' And that it does 're-masticate' its food, which would be the better rendering for the original *m'alet gerah*, can be proved by the conclusive evidence of those who have made the subject their study. The poet Cowper, giving an account of his three tame hares, makes the following statement :—

I made it my custom to carry him always after breakfast into the garden, where he hid himself, sleeping or *chewing the cud* until the evening

And so the learned J. D. Michaelis, who was at great pains to test the truth of this remastication of their food by hares, has some admirable remarks on this subject generally in his *Deutsche Uebersetzung des Alten Test.* He says:—

> Although there may have been no genuine rumination strictly so called, yet it is plain that in Hebrew it was called 'chewing again,' inasmuch as a language is not always idiomatically in agreement with nature, and the Israelites were wont to term this peculiar habit of the hare 'rumination.' The aim of the lawgiver was not to run counter to the Israelites, respecting an inconvenient expression or a mistake in natural history, but he adopted the word 'rumination' in the widest scope in which the Hebrew language received it and told them. Notwithstanding this species of rumination, you must not eat the hare, because he 'divideth not the hoof.'

The common sense of these words of Michaelis must commend themselves to every unprejudiced mind. For Moses to have spoken otherwise than as he did, or according to the jargon of the self-sufficient critics of the Rationalistic school, would have been as unreasonable as to have spoken of the earth's motion, instead of sunrise and sunset.

Leviticus xvii. 11 states that 'the life of the flesh is in the blood'—a most important and scientific truth which is found in the Bible more than 3,000 years before the attention of any philosopher was drawn to the subject. That the blood actually possesses a *living principle*, and that the life of the whole body is derived from it, is a doctrine of divine revelation which the observations and experiments of modern philosophers have served strongly to confirm. The proper *circulation* of this blood through the whole human system was also taught by Solomon in the figurative language of *Ecclesiasticus* xii. 6, 7; the truth of which was not scientifically proved until the seventeenth century, when Dr. Harvey revived the Mosaic doctrine of the vitality of blood. This doctrine, though said to have been opposed by every medical man above the age of forty during Harvey's lifetime, was subsequently confirmed by the celebrated Dr. John Hunter, who proved by a variety of most accurate experiments that the blood unites living parts in some circumstances as certainly as the yet recent juices of the branch of one tree unite with that of another. He showed that the blood taken from

the arm in the most intense cold will raise the thermometer to the same height as blood taken in the most sultry heat, which is a very powerful argument of the *vitality* of the blood, as living bodies alone have the power of maintaining that temperature which is known to us as *animal heat*. Dr. Hunter further proved that the blood preserves life in different parts of the body; for when a nerve is tied or cut, the part loses all power of motion, but does not mortify; whereas let an artery be cut, the part dies, and mortification ensues, which shows that it must be the *vital* principle of the blood which keeps the part alive; and thus we have ample proof from science of the accuracy of the Mosaic statement that 'the life of the flesh is in the blood.'

Deuteronomy xxxii. 2 reads: 'My doctrine shall drop as the rain, my speech shall distil as the *dew*.' The common notion that dew *falls* has been held in all ages, and continues to tincture every language. The ancient mythologists used to describe it as the daughter of Jupiter and the Moon, because, as Plutarch says, 'dew is most abundant at full moon!' Aristotle, who held more correct ideas concerning it than his contemporaries, describes 'dew' in his work *De Mundo* as 'humidity detached from the clear chill atmosphere.' Pliny, on the other hand, speaks of dew falling from the heavens, *cum ros cecidisset*; and so the Latin poets teach the same:—

Cum primum gelidos rores aurora remittet.—Virgil, *Eclog.* viii. 15.
Sparsaque cœlesti rore madebit humus.—Ovid, *Fasti*, i. 312.
Hinc ubi roriferis terram nox obruit umbris.—Lucretius, vi. 4.

The opinion that dew *falls* maintained its credit during the middle ages; and the alchemists declared that the reason of its vanishing in the daytime meant that it was seeking its highest seat in the heavens ready to fall down again during the night. In 1733, Gerstees, a German, who was the first to throw a doubt upon the old hypothesis, found that plants exhaled in different proportions the moisture which causes the aqueous deposits; remarking that plates of copper had only their *under surface* bedewed. Further experiments by M. du Fay, by means of panes of glass laid on the steps of a ladder at various heights, showed that the panes nearest the ground had their undersides completely wet, while the upper were

only slightly affected, and in the course of an hour a similar effect had reached the highest panes. Subsequent trials with pieces of cloth showed that dew is formed not only sooner but more copiously near the surface of the ground than at greater elevations.

From these and other experiments it is concluded that dew cannot be said either to rise or fall; but separates only from the air under a certain change of circumstances, and attaches itself to some substances in preference to others. The theory of vapour, as propounded by M. le Roy of Montpellier, throws further light on this subject, and proves the scientific accuracy of the Scripture statement. Moisture is suspended in the atmosphere by a real chemical solution in the same way as nitre and other salts are dissolved in water. The distilling power is in both cases augmented by the addition of heat. A rise of temperature enables the air to support a larger portion of humidity, while the decrease of it enfeebles the attractive power and occasions a precipitation in the shape of mist or *dew*. This explanation, which had been vaguely hinted at by Aristotle, accords with the simple announcement of Moses upwards of a thousand years before, when the inspired lawgiver distinguished between the *dropping* of rain and the *distilling* of dew.

In *Deuteronomy* xxxii. 24 we read of being '*burnt* with hunger and devoured with heat.' This is another instance of the scientific accuracy of Scripture. We know from both sacred and secular history (2 *Kings* vi. 29 and Josephus, *Bell. Jud.* vi. iii. § 4) that the terrible prediction of *Leviticus* xxvi. 19, 'Ye shall eat the flesh of your sons and of your daughters,' was literally fulfilled both at the siege of Samaria by Benhadad, King of Syria, and subsequently at that of Jerusalem by the Romans, when a woman named Mary, of noble family, driven to distraction by the pangs of hunger, ate her own child. But who could have thought that the 'tender and delicate woman, who would not venture to set the sole of her foot upon the ground for delicateness and tenderness,' should have an evil eye toward the husband of her bosom and her innocent babes, her pangs of hunger being enhanced by the pangs of burning, and martyrdom by starvation being added to the pains of fire? Yet the famous Liebig, more than 3,000 years

after Moses had written these words, discovered what had never previously been suspected, that when anyone is starved to death, *a slow combustion of the body* takes place at the same time, exactly as the prophet was inspired to threaten as a judgment upon the race of Israel.

Joshua x. 12, 13, contains the celebrated words of Joshua, which have been the subject of so much discussion, as read in the A. V.—'Sun, stand thou still upon Gibeon; and thou, Moon, in the valley of Ajalon.'[1]

The argument of those who are hostile to the infallibility of Scripture in regard to this passage is mainly as follows:—That the account given of this miracle supposes the *Earth* to be the centre of the system, and the Sun *movable*; and as this is demonstrably a false philosophy, consequently the history was never dictated by the Spirit of God.

No one who has a critical acquaintance with Hebrew, unless predeterminately hostile to Divine revelation, could argue in that way, for the simple reason that the Authorised Version does not attempt to render *literally* the passage in question; when this is done, as we shall presently see, we shall be then better able to understand the exact sense and meaning of Joshua's words.

Previous to this, I desire to point out that the argument which is sometimes used as a supposed explanation of the miracle, viz. that God arrested the Earth in its course round the Sun, does not hold good, as it necessitates a great number of secondary miraculous interferences; and although God could, if it so please Him, work any number of miracles as easily as one, we have no warrant from Scripture for concluding that He does so without a cause.

There are three distinct Hebrew words, viz. *Shemesh*, *Chamah*, and *Cheres*, which are all rendered in the Bible by the word 'Sun.' There are also two words, viz. *Yarach* and *Levanah*, for the 'Moon.' We have no reason to imagine that Scripture uses two or three different words for precisely the same idea; and though our translators

[1] *Joshua* xxiv. 30 shows that he was buried at a place named *Timnath-Serah* in Mount Ephraim; and the Rabbis had a tradition that there was an image of the *Sun* engraved on his sepulchre in remembrance of the miracle; but which Lightfoot thinks was only a Rabbinical fiction, effected by transposing the names of *Serah* and *Cheres*, the latter signifying 'Sun.'

have unfortunately omitted to notice the distinction, it is emphatically marked by the Hebrew writers, for they invariably couple the same pairs of these words. Thus *Shemesh* and *Yarach* are constantly associated, and so are *Chamah* and *Levanah*; but there is no instance of *Shemesh* being associated with *Levanah*, nor *Chamah* with *Yarach*. From this fact, which is abundantly confirmed by a careful consideration of the places in which the words occur, we understand that one set of terms denotes the *orbs* of the Sun and Moon; the other expresses the light which emanates from them both. And thus the words used by Joshua, *Shemesh* and *Yarach*, in the passage before us, mean in reality 'Sunlight' for the one, and the 'Moon's reflected light' for the other. Thus the passage may be literally rendered—*Sunlight, remain upon Gibeon; and thou reflected light of the Moon, upon the Valley of Ajalon.*

Thus the terms employed by Joshua denote the *light* flowing to us from the Sun and the Moon; and the onus lies upon those who impeach the inspiration of Scripture to show that this is *not* the sense in which they are here used. Thus when Joshua commanded the *Shemesh*, *i.e.* the 'Sunlight,' to remain upon Gibeon, and the *Yarach* or 'Moonlight' in the Valley of Ajalon, the light of the Sun and of the Moon respectively was arrested *in those specified places*, 'Gibeon' and 'the Valley of Ajalon,' and *not* the Sun, which is upwards of 90,000,000 miles distant. It cannot be said that the *bodies* of those two luminaries were upon or in the places named, though the *rays* were; and therefore it could be none other than these which Joshua, under the Divine Spirit, commanded to remain.[1]

In order to understand the true nature of this miracle, it is only necessary to assume the existence of a subtle ether universally diffused through space, which becomes luminiferous when thrown into undulations or waves. The Sun has been appointed by the Creator for exciting these undulations; and in the case before us the undulations of

[1] A similar objection has been urged against the miracle recorded by Isaiah (xxxiii. 8) concerning the Sun-dial of Ahaz. But we see the true explanation in remembering that it was the *Shemesh*, or 'Sunlight,' which 'went back ten degrees in the dial,' and not the orb itself.

this ether were miraculously sustained over Gibeon and Ajalon, while the two luminaries appointed 'to rule the day and night' continued their usual course. This explanation is founded upon 'the undulatory theory' of light; which, originally suggested by Huyghens in the seventeenth century, is now generally accepted by scientific men. According to this theory, light is caused by the undulations of an elastic medium called ether, which washes the remotest shores of the universe with an invisible ocean of so refined a character, that the stars move through its depths without encountering any perceptible resistance. Hence arise *waves* or undulatory motions which produce the effect of *Light*. Thus, by a careful discrimination of the terms in the sacred text, we have another instance of the scientific accuracy of the Inspired Word.

In *Job* ix. 7 we read, 'God commandeth the Sun, and it riseth not, and sealeth up the stars.' We must again refer to the Hebrew, in order to see what is meant by this text, as well as the real science which lies hid in these words.

In place of the term used by Joshua, we find a totally different word employed to express 'the Sun.' The word in this passage is *Cheres*, and the difference between it and the other two words for 'Sun' may be thus explained. *Cheres* is the 'orb' itself; *Shemesh* the 'light' flowing from the Sun; and *Chamah* apparently the 'solar flame,' or photosphere which surrounds the orb, and which is visible in the heavens above.

Now the English version represents this *Cheres* or 'orb' as 'rising not,' an expression which we are quite unable to explain; for, according to common parlance, the Sun rises every day, or, as in *Genesis* xix. 23 it is said, 'the Sun was risen upon the earth;' but if we understand it literally, it reads, 'the orb of the Sun is not *dissipated*,' or '*wasted*;' we see at once how truly applicable the metaphor becomes. For science teaches us that whereas common fuel is soon consumed, the orb of the Sun has, for how many ages we know not, supported the solar frame, and retains its splendour and magnitude as undiminished as when first it came from the Creator's hands.

So also we must understand the expression 'God sealeth

up the stars' in its literal meaning as completing or finishing, like *sealing* a letter implies completion. Thus we see that the expression declares God's completion of the starry heavens—in other words, when 'in the beginning God created the heaven and the earth.' Now this is contrary to the theory of the *Nebular hypothesis*, which was so long held by the scientific world, but which recent discoveries have proved untenable, and which is now given up. At one time it was stoutly maintained, especially by all materialists, that the apparent Nebulæ seen in different constellations were nothing more than matter gradually evolving itself into stars; or, according to those who recognised the Supreme Being in the work of Creation, that He was laboriously forming fresh stars or worlds out of the nebulous matter visible in the heavens above.[1]

Job xii. 8 reads, 'Speak to the earth, and it shall teach thee.' The Hebrew word 'speak' only occurs four times in the Old Testament, and signifies rather 'meditate,' as in *Judges* v. 8, where it is so rendered in the margin; and so in *Psalm* cxlv. 5, 6—'I will *speak* (*i.e.* meditate) of the glorious honour of thy majesty, and men shall *speak* of the might of thy terrible acts'—where a totally different word is used in the last of these two clauses. Thus the words of Job seem to point to the teaching to be derived from *meditating* upon the construction of the earth—in other words, the modern Science of Geology, by which men may learn many valuable lessons respecting the goodness and benevolence of the great Creator.

Thus Geology, derived from two Greek words implying that we 'speak of the earth,' teaches matters of high

[1] Thus, *e.g.*, since the great Nebula in *Orion* was discovered by Cysat, early in the seventeenth century, though the most powerful telescopes have been brought to bear upon it, it baffled every attempt to resolve it into stars. Even with Mr. Lassell's great twenty-feet reflector, with which he observed it under the pure sky of Malta, the most favourable conditions for stellar observations, it presented no appearance of being composed of stars. And it was not until Lord Rosse's more powerful telescope was brought to bear upon it, that he succeeded in resolving it into stars. There can be no doubt now, that in this instance, as in every other part of the heavens garnished with 'Nebulæ,' the whole of Orion is composed of myriads of worlds of light, some of which are at an almost inconceivable distance from the earth.

interest. The problems it seeks to solve are amongst the most attractive that can engage the ingenuity of man—leading the student from his own position and connection with this planet back through all its former aspects and conditions to the time when it came fresh from the hand of God. While, therefore, it is the privilege of the geologist to record the distribution of life in past ages, and the evidence of physical changes in the arrangements of land and water, which have been going on for countless ages, the rocky records of earth speak to him in a voice that should not be mistaken, that it ever has been, and so we infer will ever continue to be, under the ceaseless superintendence of an all-wise and beneficent Creator.

To the Christian geologist the book of Nature and the book of Revelation equally lie open to inspection. God has endowed us with faculties by which we can interpret the one, and has given His Spirit to enable us to comprehend the other. By making science a handmaid to religion, Geology becomes in reality a valuable evidence to Revelation. And when we meditate upon the great events which it proclaims, the mighty revolutions which it indicates, the wreck of successive revolutions which it displays, and the immeasurable cycles unfolded in its chronology, the period of man's tenancy of earth shrinks into nothing; his most ancient kingdoms are but of yesterday; the gorgeous temples of Egypt and the palaces of Babylon sink into insignificance beside the mighty sarcophagi of the fossil dead.

Job xiv. 7–9 conveys an instructive lesson to us respecting the effect of water upon the vegetable kingdom. Nothing but the discovery of the microscope has enabled man to learn the action of vapour upon the respiratory organs and secretionary vessels in the leaves of plants, which they inhale from the air for their nourishment, and which has been appropriately termed the *respiration of plants*. Light, it is well known, affects the respiration of animals as it does those of plants. In the day-time we expire more carbonic acid than during the night, which is mainly owing to the presence or absence of light; for sleep increases the amount of carbonic acid expired, and a man when asleep will expire more carbonic acid than

if he lies awake under the same conditions of light and air.

So, as regards the *respiration of plants*, without light and air, or vapour, they cannot breathe. By taking a tumbler, and collecting the gas found on the leaves of aquatic plants growing under water in our wayside ponds, it may be proved that they breathe when in the light, and in so doing, decompose carbonic acid, and give out oxygen. They absorb the carbon to form their woody tissues, and discharge the oxygen in so doing. This may be seen by placing the stock of an aquatic plant in a vessel of water, and covering it with a tumbler containing a quantity of carbonic acid gas mixed with air. This stock, which would die in the ground, 'through the scent of water,' as Job expressed it, will bud and live; for in a few days, it will be found that if placed in the sun the carbonic acid has all disappeared, that the plant is heavier by reason of the carbon it has absorbed, and that the air in the tumbler contains more oxygen than that which it held at first. And this process constitutes the important function known as the *respiration of plants* which appears to be thus hinted at in the Book of Job.

Job xix. 23, 24, speaks of 'words printed in a book.' In ancient times there were three different modes of writing:—1st. In a book either of papyrus or leather, or linen cloth. 2nd. With an iron stile on plates of lead. 3rd. Engraving on rocks or stones, as practised so extensively by the Egyptians and other nations of antiquity. Pliny says in his *Natural History*, xiii. c. 11:—

> At first men wrote on *palm-tree leaves*, and afterwards on the bark or rind of other trees. In process of time public monuments were written on rolls of lead, and those of a private nature on linen books or tables covered with wax.

But is the translation 'printed in a book' a true rendering of the Hebrew phrase? If so, Job predicted the discovery of the art of printing more than 3,000 years before it came to pass,[1] and which he could not have done other-

[1] The art of printing was discovered by Gutenberg in the first half of the fifteenth century. The earliest book known with a date attached to it, is a Psalter printed by John Faust in 1457, and the first Bible with a date is by the same, in 1460.

wise than as inspired by God. The Hebrew *chakak*, 'printed,' signifies literally to *cut*, *carve*, or *engrave*; but as neither of these terms could be applied to 'a book,' it is not unreasonable to suppose that Job, under the Divine afflatus, may have thus predicted what in due time was actually accomplished, and which has been of such inestimable blessing to man, both in a spiritual as well as a temporal point of view.

Job xxvi. 7 mentions that 'God stretcheth out the north over the empty place, and hangeth the earth upon nothing.' Here we find a double instance of the scientific accuracy of Scripture. 1st. God is said to 'stretch out the *north* (pole) over the empty place.' The Hebrew word for 'stretched out' also signifies 'turned,' evidently denoting the motion of the earth in her orbit round the sun, the effect being that the region of the North Pole is virtually barren, desolate, and 'empty.' This appears to be the only satisfactory explanation which can be given for the declaration of Job that the great Creator 'stretcheth out the north over the empty place.'

2nd. It is also said that He 'hangeth the earth upon nothing'—an expression which surely points to the law of gravitation, discovered by the genius of Newton not two centuries ago. Now we may fairly ask what uninspired man ever had any certain knowledge of the real shape of this globe, and how it is suspended in space 'upon nothing,' until that time? or had a conception of it before the time of Copernicus, about two centuries earlier? The Hindoo legend of the earth being supported on the back of an elephant, which again was upheld by a tortoise, was the limit of man's ideas on the subject, which now appears so simple and plain. It is true that the Pythagoreans, according to the report of Philolaus of Croton, taught the progressive movement of a non-rotating earth, and that Aristarchus of Samos, and Seleucus of Babylon, are said to have taught that the earth not only rotated upon its axis, but also moved round the sun. (It has been already seen what Plato and Aristotle thought on the subject.) But these ideas were so much in advance of the age, that they were rejected by the learned, who still thought that the earth neither rotated on its axis, nor advanced in space, but that, fixed to one central point, it oscillated, like a

half-filled balloon, from side to side. Eratosthenes, the most distinguished philosopher of the Alexandrian school, believed that there was an 'external sea surrounding all continents.' And though the Latins appear to have had some truer conceptions of the form of the earth, as, *e.g.*, Ovid says:—

> The earth, like a ball resting upon no support, hangs a heavy weight upon the air beneath.—*Fasti*, l. vi. 8.

and Lucan, a Spanish poet, murdered by Nero, speaks of—

> The earth being poised in empty air.—*Pharsalia*, l. v. 94.

and so Pliny says:—

> We have another miracle brought to our notice! The earth itself is pendent, and doth not fall with us. It is doubtful whether this be from the force of the spirit which is contained in the universe, or whether it would fall, did not nature resist by allowing of no place where it might fall.—*Hist. Nat.* l. ii. 65.

nevertheless the world required nearly 2,000 years' further education before it could receive the truth on this matter as set forth and explained by Copernicus and Newton, but which Job, speaking by inspiration, was enabled to declare, in the simple language of Scripture, so many thousand years ago.

In *Job* xxvi. 13 we read, 'By his spirit he hath garnished the heavens; his hand hath formed the crooked serpent.'

Innumerable have been the interpretations of commentators on this passage of Holy Writ. Some think it refers to the clearing of the sky after a storm. 'His spirit' meaning the *wind*, and the 'crooked serpent' the *ecliptic*, as the sun's apparent course appears to be somewhat *serpentine* in its approach to and recession from each of the tropics.

Others imagine the allusion is to the *lightning*, in that *zig-zag* form which it assumes when discharged from one cloud into another during a thunderstorm.

Others think that the *act* of the *creation* of the solar system is intended to be expressed, which is, in certain parts of Scripture, attributed to the Spirit of God. See *Genesis* i. 2; and *Psalm* xxxiii. 6. And that the 'crooked

serpent' means either *Satan* or some huge aquatic animal, like a *whale* or a hippopotamus!

Bishop Sherlock explained it to mean the religious system of *Sabœism*, which acknowledged two opposite independent principles by which the universe was governed; and paid Divine adoration to the celestial luminaries. Thus Job asserts, in opposition to the idolatrous practice of the time, God to be the maker of all the host of heaven; and in opposition to the false notion of two independent principles, he asserts God to be the maker of him who was the author of evil, or *the crooked serpent*. Thus observes the Bishop:—

> You see how properly the *garnishing of the heavens*, and the *forming of the serpent*, are joined together.—*Dissertation on Prophecy*, ii.

None, however, of these interpretations seem a very satisfactory explanation of the text. But if we remember how much is said about Astronomy in the Book of Job, we see the natural connexion between the first term 'garnishing the heavens'—which we can scarcely doubt means furnishing the heavens with those worlds of light which are at once its ornament and proof of the Almighty's power—and that the second term, 'the crooked serpent,' points to that beautiful constellation termed by astronomers *Serpens*, which is represented in astronomical maps with its *tail* in the centre of the Milky Way, and with its 'crooked'[1] body towards the north-eastern quarter of the heavens.

Job xxviii. 1, 6, speaks of a '*vein* for the silver,' and of 'the earth, it hath *dust* of gold.' This chapter has been pronounced the oldest and finest piece of Natural History in the world, as it gives us very important information on several curious subjects; and if we could ascertain the exact sense of all the Hebrew terms employed, we should probably discover allusions to several arts which we are apt to consider of comparatively modern invention.

Thus we see concerning the metals 'silver' and 'gold,' Job draws the distinction which Modern Science and

[1] בריח is the word rendered 'crooked;' which the LXX. translate as φεύγοντα 'fleeing.' Dr. Wilson, in his *Bible Student's Guide*, observes on this word—'The constellation in the heavens is undoubtedly intended by the crooked or fleeing serpent.'

recent discoveries have made abundantly clear between 'the vein of silver' and 'the dust of gold;' indicating that there are *mines*, properly so called, of the one, but not of the other. It has been found that the distribution of *gold* in the parent rock differs from that of every other metal in the superficial range of its threads. Lodes of iron, copper, and lead containing silver, when followed downwards, usually become more and more productive, the reverse being the case with gold. Sir R. Murchison says:—

> The indisputable fact that the chief quantities of gold having been originally imbedded in the upper parts of the vein stones, have been broken up and transported with the *débris* of the mountain tops into slopes and adjacent valleys. *Modern Science, instead of contradicting, only confirms the truth of the aphorism of the Patriarch Job,* which thus shadowed forth the downward persistence of the one, and the superficial distribution of the other.—*Siluria,* p. 457.

In *Job* xxviii. 25 God is said 'to make weight for the winds; and he weigheth the waters by measure.' This appears to be another proof of *Science in Scripture*, as the weight of the circumambient air 'for the winds' was unknown until Torricelli invented the barometer, and Galileo applied it to a legitimate use.

In order to understand the meaning of God 'making weight for the winds,' we should remember that He has given an atmosphere to the earth, which by its *gravity* should be the cause of preserving all the animal and vegetable life which He had created; for by it the *blood* circulates in the veins of animals, and the juices in the tubes of vegetables. Without this *pressure* there could be no respiration; and the *elasticity* of the particles of air in animal and vegetable bodies, without such pressure, would rupture the vessels in which they are contained, and destroy both kinds of life. Modern Science has discovered that this *weight of the winds* is so perfectly proportioned to the requirements of the earth, that we find it on the average neither too *light* to prevent the undue *expansion* of animal and vegetable tubes, nor too heavy to *compress* them so as to prevent proper circulation.

And so concerning the expression 'He weigheth the waters by measure.' The aqueous surface of the globe is as three to one of the terrene; and experiments on eva-

poration respecting the quantity of vapours which arise from a given space, in a given time, prove that it requires such a proportion of *aqueous surface* to afford moisture sufficient for the other proportion of *dry land*. Thus we see the scientific accuracy of Job's language, when he records that God has given the waters in due measure, as He has also made the proper proportion of weight for the winds.

Job xxxvii. 16 speaks of 'the balancing of the clouds' as the 'wondrous works of him who is perfect in knowledge.'

The 'wondrous works' of the Creator may be defined as endless in their variety; stupendous in their structure; complicate in their parts; indescribable in their connexions; and incomprehensible in their formation, as well as the cohesion of their parts, and the ends of their creation. Now all this is specially apparent in 'the balancings of the clouds'—a notable proof of His 'wondrous works, who is perfect in knowledge.' The clouds, like the air, are said to be weighed in a balance by Him who alone can regulate their density, and apportion their size according to the necessities of man, and the pleasure of His own will. And their 'balancings' imply their change of gravity, and their consequent risings and fallings. Although Elihu, the speaker in Job, knew nothing of *evaporation*, and the gravity and power of the air at different heights to support different weights of aqueous vapour, so as to keep them floating for a certain portion of time, and then to let them down for the purpose of watering and fructifying the earth, it is one of the many evidences of the Truth of the Bible that he was enabled, under the teaching of God, to state as a fact what Modern Science has at length discovered to be the case.

Job xxxviii. 31 refers to 'the sweet influences of Pleiades and the bands of Orion,' or, as it is termed in *Amos* v. 8, 'the seven stars and Orion.' Probably this sentence is an instance of Hebraistic idiom, so that it should be understood rather as 'the bands of the Pleiades and the influences of Orion;' as in *Psalm* xcv. 7 it is said, 'We are the *people* of his pasture and the *sheep* of his hand.'

Assuming this to be the case, we must note the exact

meaning of the word translated 'bands,' which might be more literally rendered as 'attraction' or 'influence,' and the term 'sweet influences' is literally 'delicacies' or 'delights.' Rosenmüller and Gesenius both render it as *Vincula Pleiadum*, 'the bands of the Pleiades,' to which interpretation Lee objects. But whatever be the exact rendering, it is doubtless intended to denote some peculiarly attractive power connected with the Pleiades. Some have interpreted the comparison between the 'Pleiades' and 'Orion' to denote the *vernal* renovation of nature as opposed to its *wintry* destructions—the mildness of spring to the severity of cold. Others, again, have found in the passage a reference to the influence which the stars were once supposed to have upon the seasons, forgetful of the declaration of Moses, that God had appointed the sun and the moon as the two great lights 'for signs and for *seasons*, and for days and for years.'

What then is the meaning of the 'influence' or attractive power of the Pleiades referred to in the text? Until the present great advance in the science of Astronomy, it was impossible to understand the meaning of this attractive power. But recently it has been explained by one of the wonderful discoveries in that science. After infinite labour in the way of observation, the revolution of our solar system around some central astral-sun appears to be recognised as a sound theory. The late Sir William Herschel was the first to demonstrate that our sun forms one of the stars of the great stratum called the 'Milky Way;' and that it has a progressive motion in space round some far distant centre, and which Sir John Herschel computes at the rate of 422,000 miles *per diem* (*Outlines of Astronomy*, § 858). The 'influence' of this central sun upon our solar system is a necessary consequence of the law of gravitation. Professor Mädler, of Dorpat, a distinguished Russian astronomer, who has for years devoted his attention to the subject, has determined the 'influence' which the Pleiades have upon the earth, as they form the central group of our whole astral system; and that Alcoyne, or η *Tauri* as it is scientifically named, is the star of this group which appears most probably the true central sun. Light, which passes through space at the rate of more than 190,000 miles per second, takes 539

years in its flight from Alcoyne to our solar system, and requires the lengthened period of 330,000 years to reach the outer extremity of the Milky Way. But far more than this, it has been estimated that over 18,000,000 years are required in order to effect one single revolution around this central sun. May we not exclaim, when contemplating the power of Him who has called into existence, and regulated the attractive power or 'influence' of the heavenly bodies upon one another with unerring wisdom—

> These be Thy glorious works, Thou Source of Good!
> How dimly seen, how faintly understood! (?)

From what has been said, we see how many passages in the Book of Job seem to refer to what may be properly described as *Science in Scripture*. Dr. Adam Clarke observes :—

> It is generally supposed that the former times were full of barbaric ignorance; and that the system of philosophy, which is at present in repute, and is established by experiments, is quite a modern discovery. But nothing can be more false than this; as the Bible plainly discovers to an attentive reader, that the doctrine of *statics*, the *circulation* of the blood, the *rotundity* of the earth, the *motions* of the celestial bodies, the process of *generation*, &c., were all known long before Pythagoras, Archimedes, Copernicus, or Newton were born.—Clarke's *Commentary on the Book of Job*.

To pass on to the Book of Psalms, we have one instance at least of scientific truth to be found therein; for David, in *Psalm* cxlvii. 16, speaks of 'Jehovah giving snow like wool.' The Jews (as the Targum and their Rabbis, like Kimchi, taught) very naturally considered that the comparison of 'snow' to 'wool' referred merely to similarity of *colour*. The ancients used to call snow 'woolly water,' and Martial, the Roman poet, gives it the name of *densum vellus aquarum* (*Epig.* iv. 3), 'a thick fleece of waters.' And Professor Owen, with his usual accuracy, describes *Wool* as

> A peculiar modification of hair, characterised by fine transverse or oblique lines, from 2,000 to 4,000 in the extent of an inch—indicative of a minutely imbricated scaly surface—when viewed under the microscope, on which, and on its curved or twisted form, depends its remarkable felting property.

It should be remembered that 'felting' expresses the warmth engendered in stuff which is so closely united without weaving.

Now it is evident that the comparison of the Psalmist

refers to the admirable manner in which the great Creator in His inscrutable wisdom has ordered that snow falling upon the earth should clothe it, and felt it and warm it and cause it to fructify for the use of man. Modern Science proves that *snow* maintains its internal heat exactly in the same way as wool on the sheep's back; the minute fibres entangle the air, and, forbidding its escape, prevent the introduction of cold. This explanation enables us to understand the scientific accuracy of the Psalmist when he speaks of 'Jehovah giving snow like wool.'

We read in *Proverbs* vi. 6–8 of the ant 'providing her meat and gathering her food in the harvest.' This assertion of the wise King of Israel has been boldly contradicted by naturalists, who declare that Solomon was mistaken in the ways of the ant; that it does not lay up a winter store like the bee; that he mistook the pupa of the ant for grains of wheat; and that on this account he stated what was not scientifically true. Now these sceptical naturalists have forgotten that the various tribes of ants differ as much in their instincts as do the various tribes of the bee. And in this instance we can adduce the evidence of so 'acknowledged' an authority as Mr. Charles Darwin, who read in 1861 before the Linnæan Society an abstract of a paper by Dr. Lincecum describing what he calls the 'Agricultural Ant.' This ant, which is a native of Texas, not only lays up a store of seed, but it cultivates it. It plants a crop of grass round its mound, which it first weeds, then harvests; when ripe carefully winnowing the grain, and then stores it up for use. The grain is a kind of miniature rice, and when it gets damp and liable to sprout, the ants take advantage of the first fine day to bring out the damaged grain, and expose it in the sun until it is dry; then they carry it back and pack away all the sound seeds, leaving those that had sprouted to waste. Such is the testimony of an experienced naturalist after twelve years' watching of the habits of this species of ant; and his experience is sufficient to show the scientific accuracy of the Bible as regards the provision and gathering of their food in harvest by the ants of Palestine.

In *Proverbs* viii. 22–26, which is evidently intended to set forth the eternity of the God-man Christ Jesus, our English Bible fails to convey the exact meaning of some

of the Hebrew words, owing probably to the small amount of scientific knowledge extant when the translation was made. Thus the expression 'when there were no depths' clearly denotes, before the seas had settled in their present position; and the following clause, 'before the mountains were settled was I brought forth,' plainly refers to the gradual elevation of the mountain ranges out of the ocean depths, which Geology shows was the case in ages long past. And so the next clause, 'while as yet he had not made the *fields*' (*hootzoth*), points to the various *strata* which surround the earth, as in geological works it is commonly compared to an *onion*, on account of its various leaves, which overlay one another; for the word *hootzoth* really signifies 'any thing or place surrounding or inclosing another.' In the text it evidently means the successive formations or strata which constitute the crust of the earth, each of which in its turn was once the *outer* or *upper* surface when elevated above the water. And in this we have another instance of harmony between the discoveries of Modern Science and the teaching of the Word of God.

Proverbs viii. 27 refers to the Creator having 'set a compass upon the face of the deep;' which expression, together with the context, seems to denote a measured progress in the act of creation, as well as an arrangement of pre-existing materials, which accord with the discoveries of Modern Science, that this earth was fitted up for the habitation of man many years after it was originally called into existence. The declaration that the Creator set a *compass* upon the face of the deep, or, as it is expressed elsewhere, in *Job* xxvi. 10, 'compassed the waters with bounds,' points alike to the fact of this world being in form a terraqueous globe (so long unknown to educated man), as well as to the *law of gravitation*, by which all the particles of matter, tending to a common centre, would produce in all bodies the *orbicular* form which we see them have; so that even the *waters* are not only retained within their boundaries, but are subjected to the *circular form*, in their great aggregate of seas, as other parts of matter are. This is called 'making a compass upon the face of the deep' in order to bring the chaotic mass into the *form of an orb*, as Isaiah (xi. 22) speaks of the Most High as sitting 'upon the circle,' *i.e. compass* or *circum-*

ference, or sphere 'of the earth.' For the Hebrew *Chug*, rendered 'compass' and 'circle' in *Proverbs* and *Isaiah*, may with the greatest propriety be translated *orb* or *sphere*. And thus Solomon, the wisest of men in ancient times, by the inspiration of God, was enabled to state with marvellous accuracy a scientific truth, thousands of years before Newton, the most gifted of men in modern times, was able by his own genius and skill to find it out.

Proverbs xxv. 20 compares 'vinegar upon nitre to one that singeth songs with a heavy heart.' Science tells us that vinegar upon *nitre* produces no effect whatever. What then can be the meaning of Solomon's comparison? It is simply this. The Hebrew *nater* is not the same as our 'nitre,' but what the chemists call 'Carbonate of Soda.' It appears to have its Hebrew name from the verb *natar*, to 'dissolve' or 'loosen;' because a solution of it in water possesses abstersive and detergent qualities, to which Jeremiah (ii. 22) refers when he says, 'Though thou wash thee with *nitre* (*natar*), and take thee much soap, yet thine iniquity is marked before me, saith the Lord God.' Hence this *natar* when mixed with vinegar produces an effervescence, and fermentation immediately takes place, as well as having a strong cleansing power when used with soap. Thus Solomon's comparison of 'singing songs to a heavy heart' being like 'vinegar upon *natar*' indicates the absence of affinity between them, and opposition and strife are occasioned by any attempt to unite them.

Proverbs xxx. 28 tells us that 'the spider taketh hold with her hands, and is in kings' palaces.' Natural History teaches us that of the spider class the *Arachnidæ* possess eight *legs*, while the true insects have only six *legs*. Why then did Solomon speak of the *hands* of the spider? We can only explain it by the scientific accuracy with which small matters like this, together with a multitude of others, are spoken of in the Word of God. The word translated 'hands' is the same as when *human hands* are referred to in *Proverbs* xi. 21 under the term 'joining of hands;' and not the same as when 'the legs' of locusts, beetles, or creeping animals are described, as in *Leviticus* xi. 21, 22.

We also discover from Natural History that the spider class possess no wings or antennæ, their place being supplied by two fangs, which so far resemble hands that they are

able to work with them in a manner which the utmost skill and ingenuity of man has never been able to attain. Blackwall, the greatest of living authorities on the subject, tells us in reference to the spider's web, that upwards of 120,000 viscid *globules of light* are distributed upon the elastic spiral line in a net of large dimensions, and that under favourable circumstances the time required for its completion seldom exceeds forty minutes, which beats any spinning-jenny in the world. In this passage, therefore, of the *Proverbs* of Solomon we have another of the many instances gathered from his writings of the harmony between Scripture and Science, proving that he must have written by the direct inspiration of God.

In *Ecclesiastes* i. 5, 6, it is written: 'The sun ariseth and goeth down, and hasteth to his place where he arose; *he* goeth toward the south and turneth about to the north.' Our English Bible attributes the last clause to the *wind*, instead of to the sun, as the Hebrew and all other versions refer it. Assuming this to be the correct rendering, as it would be without meaning to speak of the wind 'going towards the south and turning about to the north,' we understand the words of Solomon to express the diurnal and annual course of the sun, without contradicting anything which science has subsequently found true. And thus we find the inspired writer noticing two things which accord with what science teaches on the subject:—1st. Day and night marked by the appearance of the sun above the horizon, travelling from east to west, where he is lost sight of during the silent hours of the night. 2ndly. The annular course of the sun through the twelve signs of the Zodiac, when from the equinoctial points 'he goeth toward the south' to the tropic of Capricorn, from which 'he turneth about unto the north,' until he reaches the tropic of Cancer. Now all this implies very different teaching from the idea of the shape of the earth which the learned world so long supposed to have been round like a plate; and which the ancient Iberians, who dwelt on the western coast of Hispania, understood so literally that they believed they could hear the sun hiss as the fiery ball nightly sank into its watery bed!

In continuation of the same text in *Ecclesiastes*, it is said that 'the wind whirleth about continually, and returneth

again according to his circuits.' Here we have an indication respecting the *rotatory theory of storms*, viz. that hurricanes and storms do not blow, as formerly imagined, in a straight line from a single point, at a great distance, but that they are vast eddies in the air, which whirl about like the eddies of a stream of water, according to the conclusions of science. In the *Archæological Journal*, vol. vii., there is an account of the mode by which Colonel Reid has been able to prove scientifically the fact that the winds go and return in circuits just as Solomon had described 3,000 years before the learned world knew anything of the matter.

In the verse following of the same chapter in *Ecclesiastes* we read that 'all the rivers run into the sea; yet the sea is not full: unto the place from whence the rivers come, thither they return again.' Thus Solomon further taught, long before the ingenuity of man had enabled him to discover it, the great system of aqueous circulation which is ever going on. How comes it that the sea is not full, since so many gigantic rivers are unceasingly pouring into its depths such mighty streams of water? The reason is, as science teaches, that nothing goes into the sea, either from rivers or rain, which does not come from it. Water exhaled from the sea by *evaporation* at the rate of 60,000 cubic miles on an average annually, is collected in the clouds, then it is condensed into rain, then it descends to the earth, and percolates through its surface, then it rises in springs, the commencement of mighty streams, and finally is carried by these into the seas from whence it was first derived. We may therefore safely affirm that the *theory of evaporation* could not have been stated, as it is in this passage, by anyone at that period of history unless speaking by the inspiration of God.

In the account of Christ's crucifixion as recorded by the Evangelist John (xix. 34), it is said, 'one of the soldiers with a spear pierced His side, and forthwith came thereout blood and water.' It was at one time the custom for learned sceptics to affirm that the Evangelist's account (notwithstanding it was that of an eye-witness of a fact, as he adds, 'he that saw it bare record, and his record is true') of the issue from the Saviour's wound could not have been correct, as if His frame had been made in all

things like to our own, it would have been, they assumed, *blood only*. But, as Fullom in his *Marvels of Science* justly remarks on this passage, 'Here science has risen up like a holy Apostle, to testify to the truth of Christianity.' For medical science has now discovered that the heart is invested with a hollow membrane, somewhat like a purse, called the 'pericardium,' containing a small quantity of *clear water*, and consequently the issue from the Saviour's wound must necessarily, according to the inspired record, have comprised both 'blood and water.'

The same Evangelist, in his first Epistle general to the Christian Church, was inspired to teach, first, that the God whom we worship condescended to compare Himself to light, as the most suitable emblem of the perfection of purity, for 'God is light,' writes St. John; and second, that this one supreme God is revealed to us in the three-fold persons of Father, Son, and Holy Ghost, as it is conveniently expressed in the well-known term of *Trinity in Unity*.

Now science has shown that white light, as demonstrated by Sir Isaac Newton, may be decomposed by a prism into the seven prismatic colours, three of which, viz. red, yellow, and blue, are termed primary, the remaining four being compounds of two of the primary colours. Supposing we place three transparent discs composed of the three primary colours, so that they overlap each other, a perfectly pure white light is the result; thus proving that white light is in reality the trinity of primary colours in unity. Each of the coloured rays in this trinity possesses a distinct property, just as the three several persons in the Godhead possess separate attributes though perfectly united. Thus the red rays in the spectrum are found to be calorific, or heating—the yellow are luminous, or light-giving—and the blue what the chemists term 'actinic,' possessing an important, though, except in its effects, an invisible influence, as exemplified in the art of photography. As light and heat are so essential to the growth of plants, it was thought if frames containing plants were furnished with such coloured glass as would absorb the blue or actinic rays, and yet allow the red or heating, and the yellow or luminous rays to pass freely, their growth and fruitfulness would be greatly

increased; and such, as far as *the blossom* was concerned, soon proved to be the case. But the influence of the third property in this trinity of the primary colours having been excluded, the blossoms all withered away and *brought forth no fruit.* From which we may learn this useful lesson in things spiritual, that without the influence of the Holy Spirit, the third person in the Divine Trinity, we can bring forth no fruit to perfection which will endure unto everlasting life.

From a review of what has been considered in this and the chapter on the *Mosaic Cosmogony*, we may confidently point to what Scripture really teaches respecting such subjects as the creation of the heaven and earth in the beginning; the existence of light independent of the sun; man's dominion over the air not given him, and consequently not to be obtained by him; circulation of the blood; starvation by internal heat; cause of the formation of dew; miracle of the sun standing still explained; nebular hypothesis set aside; science of geology generally; respiration of plants; the art of printing; true form of the earth; law of gravitation; vein of silver and dust of gold; weight of the winds; balancing of the clouds; central sun of the heavens; property of wool; different formations of the earth's crust; compass of the deep; action of vinegar upon nitre; natural history relative to the hare, the ant, and the spider; sun's annular path; rotatory course of storms; theory of evaporation; formation of the human heart; analogy between the Triune Deity and the constitution of light—all of which, as I believe, are either clearly set forth or incidentally referred to in Scripture, and to be regarded as evidence in favour of THE TRUTH OF THE BIBLE, as well as a proof that the sacred writers could only have spoken as they were moved by the Holy Ghost and under the perpetual influence of the Spirit of God.

EGYPTOLOGY IN CONFIRMATION OF SCRIPTURE.

CHAPTER XI.

It is a remarkable and instructive fact, that as open attacks are made upon the Truth of the Bible, and the contemptuous ignoring of its claims to a hearing, which is so conspicuous a feature in the controversies of the present age, is made patent to the world, evidences to strengthen and confirm our faith are springing up on all sides, so that the antidote and bane simultaneously appear in public view. The key which has unlocked the literary treasures of Egypt, the discoveries at Niveveh and Babylon, the explorations in Palestine, and suchlike circumstances, all point to the same end. One thing every traveller in the East, whether religious or sceptical, most readily admits—the perfect harmony between the Bible and the land in which it was written. What the unbelieving Volney[1] declared in a past age on this point, M. Renan, a leader amongst the rationalists, has frankly owned in the present day, as he justly says:—

Toute cette histoire qui, à distance, semble flotter dans les nuages d'un monde sans réalité, prit ainsi un corps, une solidité, qui m'étonnèrent. L'accord frappant des textes et des lieux, la merveilleuse harmonie de l'idéal évangélique avec le paysage qui lui servit de cadre, *furent pour moi comme une révélation.*

This is a remarkable admission on the part of an avowed sceptic, which the student of archæology in general

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[1] 'O ye solitary ruins! Ye silent walls! How many useful lessons, how many striking reflections, do ye offer to the mind *which is capable of considering you aright*!' is the affecting exclamation of Volney when moralising on the subject.—*Ruins of Empires,* chap. iii.

and Egyptology[1] in particular, relative to the Bible, will do well to remember.

There is an interesting episode in the history of Israel's wanderings in the wilderness, as recorded in *Numbers* xi. 26, which bears upon the subject of our consideration. When the Spirit of Jehovah had been poured out upon the seventy elders, they went up to the tabernacle to prophecy, two of their number, Eldad and Medad, remaining behind, of whom it was said, 'and they were of them that were written,'—a phrase confessedly obscure as it stands in our English Bible, but which the literal translation renders easy enough, when it would be read, 'and they were among THE INSCRIPTIONS,' thereby showing that the Israelites, like the other civilised nations of antiquity, made use of that means to record their national exploits.

I propose in this chapter to notice the evidence relating to THE TRUTH OF THE BIBLE which has been obtained from the inscriptions recorded on the monuments of Egypt, reserving those found in the archæological remains of other nations for subsequent consideration.

It is not necessary to give any lengthened explanation of the mode by which these inscriptions have been rendered useful to the Biblical student, save by noticing that the decipherment of the trilingual Rosetta stone, now in the British Museum, was first attempted by Dr. Young in this country about sixty years ago; and that the system which he inaugurated has been more than confirmed by the genius of such men as the two Champollions, De Rougé, Mariette Bey, and Chabas, amongst the French; Lepsius and Brugsch amongst the Germans; and of Englishmen, the not less distinguished names of Birch, Osburn, Renouf, Goodwyn, and others, who have contributed their share to the chief philological triumph of the present day.

The stone itself was originally set up in a temple at

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[1] 'Is it not marvellous,' exclaimed the late Dr. Arnold, 'that they can now read the old Egyptian readily and understand its grammar! These Egyptian discoveries are likely to be *one of the greatest wonders of our age*.' This fact seems to have been anticipated, according to one of the Hermetic books, wherein Trismegistus is represented as exclaiming, 'O Egypt! Egypt! fables alone will be thy future history, and nought but the letter of thy stone-engraved monuments will survive.'

Memphis, dedicated to *Tomos*, 'the setting sun,' which was erected to that deity by Pharaoh-Nechoh, the conqueror of king Josiah, B.C. 609, and was discovered A.D. 1799 by M. Boussard, a French officer of Buonaparte's army in Egypt. The battle of Alexandria placed it in the hands of the British, when it was found to have a trilingual inscription, the upper one in *hieroglyphics*, the centre in characters known as the *enchorial* or *demotic*, and the lower in *Greek*; from which it was seen that the inscription was in honour of Ptolemy Epiphanes, who reigned in Egypt B.C. 205–181.

A very brief sketch of the chronology deducible from the Egyptian monuments shows so perfect an agreement with the chronology gathered from the Hebrew[1] Scriptures, that we cannot but regard it as a very important element in proof of THE TRUTH OF THE BIBLE. The only Egyptian writers, whose histories have come down to us, who have treated on this subject, are Manetho and Eratosthenes, both of whom flourished in the third century B.C. The former places the reign of Menes, the Mizraim of the Bible, and first King of Egypt, A.D. 5892. The latter more correctly, as it accords with the Hebrew chronology, B.C. 2306, which may be collected as follows. He gives 986 years from Menes to Pharaoh *Nilus*, whom Herodotus (ii. § 3) calls the son and successor of Ramessu the Great. Dicæarchus, a Greek historian of the fourth century B.C., says, 'From the time of Pharaoh *Nilus* to the first Olympiad there were 436 years.' (See Bunsen's *Egypt's Place*, &c., i. p. 712, and v. 19.) Supposing this refers to the time when the Olympic games were first instituted by Iphitus, B.C. 884, this would give B.C. 1320 as the date of Pharaoh Nilus's accession. By adding 986 to this, we obtain B.C. 2306 as the date for the commencement of the reign of Menes the proto-monarch of Egypt. As the date of the dispersion from Babel must be placed B.C. 2330, and the colonisation of Egypt followed soon after, this would

[1] This is not the place to consider the difference between the chronology of the *Hebrew* Scriptures and that of the LXX.; it will be sufficient to say, that after a prolonged investigation of the subject I think the arguments in favour of the *former* outweigh those of the latter.

harmonise very well with Eratosthenes' computed date for the beginning of the Egyptian kingdom.

Accepting, then, the chronology of Eratosthenes for the commencement of the kingdom of Egypt as being in harmony with that of the Hebrew Scriptures, we must place its date somewhere in the twenty-fourth century before the Christian era. And I shall be enabled to show solely from Egyptian sources how far such chronology is confirmed by the inscriptions and papyri which have recently been found in that country.

The Turin papyrus says there were 355 years from the time of Menes to the close of the sixth Dynasty, which event must therefore be dated about the year 2000 B.C. This has received a double confirmation from astronomical science—first, in the proof it offers that the Great Pyramid, which is well known to have been erected during the era of the fourth Dynasty, was being built in the year which answers to B.C. 2170 (see Howard Vyse's *Pyramids of Ghizeh*, vol. ii., App. p. 107, and Piazzi Smyth's *Life and Work at the Great Pyramid*, iii. 287); and second, that the *tropical cycle* of the Egyptians, *i.e.* a perfectly exact cycle of the sun, moon, and vague year, of which there is monumental proof that it was introduced at the commencement of the twelfth Dynasty, is fixed by astronomy to B.C. 2005 (see Poole's *Horæ Ægypt.* Pl. I. § 11).

Mariette Bey, one of the highest of living authorities in such matters, discovered at Memphis a priest's tomb with forty cartouches, showing that the sixth Dynasty was succeeded by the twelfth Dynasty; so that we can produce Egyptian evidence in favour of the first Dynasty having commenced in the twenty-fourth century B.C., which harmonises with the chronology deducible from the Hebrew Scriptures.

The genealogy of Prince Aahmes, belonging to the court of Pharaoh Acthoes, who immediately preceded the twelfth Dynasty, is recorded in regular succession from father to son through *eleven* descents, and is brought down to the commencement of the eighteenth Dynasty, which is fixed by a variety of circumstances—such as a perfect agreement between Scripture computation and all the historians, together with the Egyptian monuments—to a

date as certain as that of the Norman Conquest, viz. to B.C. 1706. (See Osburn's *Monumental History of Egypt.*) An intermediate date of much importance, having been discovered by the skill of Mariette Bey on a monument of the time of Ramessu the Great respecting the Shepherd Dynasty, whose reign began 400 years before, it shows that the interval between the two periods synchronised with the years B.C. 1800—B.C. 1400.

The history of the first part of the eighteenth Dynasty is of peculiar interest to the Biblical student, as it embraces that period from the death of Joseph to the time of the Exode, which is fixed by an overwhelming amount of evidence to B.C. 1580.

Mariette Bey found in the catacombs of the Serapeum the remains of sixty-four sacred bulls, which the Egyptians worshipped as their chief deity Apis, extending from the time of Amenophis III., who succeeded the Pharaoh drowned in the Red Sea, down to the reign of Cleopatra, according to Plutarch's statement concerning the Apis cycle being reckoned at twenty-five years. (See an account of this in *Le Serapeum de Memphis découvert et décrit par M. Mariette.* Paris, 1863.) Allowing between twenty-four and twenty-five years for the duration of each Apis, this would give between fifteen and sixteen centuries for the interval between the Exode and the time of Cleopatra, whose reign terminated with the battle of Actium, B.C. 30, while it accords perfectly with the chronology for that period, both sacred and secular alike; and is further confirmed by certain fixed dates, together with a variety of incidents gathered from Egyptian sources—such as the accession of Ramessu III., fixed by a monument at *Medinet-Abou* at B.C. 1311 (Lenormant's *Manuel*, i. 299); or the reign of Ramessu XII., fixed by a stèle in the Louvre at B.C. 1120 (Bunsen's *Egypt's Place in Universal History*, iv. 628); or the genealogy of the chief architects of Egypt inscribed on a monument at Hamamat, extending through twenty-five generations, from the time of Ramessu III., B.C. 1321, to that of the last of the Pharaohs previous to the Persian Conquest, B.C. 525 (Palmer's *Egyptian Chron.* ii. 593); all of which converge to one focus, showing how truly it may be said that the chronology of Scripture and that gathered

from the monuments and papyri of Egypt synchronise and agree with each other.

This evidence respecting the harmony between the two chronologies will naturally lead us to consider what light the archæology of Egypt throws upon various incidents recorded in Scripture; and how it thereby affords a valuable and incidental confirmation to THE TRUTH OF THE BIBLE.

Do the monuments show that the Egyptians had any traditionary knowledge respecting our first parents in Paradise as recorded in Holy Writ? I think so, as the following evidence will show. In a collection of hieroglyphic plates published by the Egyptian Society, and edited by the late Dr. Thomas Young, there is a picture of a tablet from the Temple of Osiris at Philæ, on the Nile, in which every particular of the Mosaic account appears depicted to the life. There we find a representation of a man and woman standing beside a pomegranate-tree, from which one appears to have plucked some fruit and to have given it to the other, while a basilisk, or crowned serpent, is represented as standing erect beside the woman, as though the sentence 'upon thy belly shalt thou go' had not yet been passed; telling its own tale, and placing beyond all doubt the fact, that in this picture we have an Egyptian delineation of the Temptation and Fall of Adam and Eve.[1]

So in Denon's work on Egypt, the plates show how completely the Egyptians seem to have realised the condition of the serpent previous to the Fall as recorded in Scripture. Thus at Plate LII. we find various representations from different temples of the serpent as follows:—1. A snake with two human heads and a branch growing from

[1] The scene of the Fall is not the only one in which the pomegranate-tree appears on the Egyptian monuments. In Plates XXXII. and XXXVI. of the second series of Wilkinson's *Manners and Customs of the Ancient Egyptians*, we see a picture of the goddess *Netpe*, or *Nebthi*, 'the mother of mankind,' seated in the midst of a pomegranate-tree, pouring liquid from a vase upon a figure beneath the tree, with the head of a man and the body of a bird, who is represented as eagerly stretching forth both hands to receive the welcome libation. This also resembles the Mosaic account of the Temptation in Paradise.

its back. 2. A snake with body perpendicular and tail horizontal, having a human head surrounded by stars and supported by two human legs. 3. A figure with a snake's head and a human body —a pair of animal paws and a snake's tail, standing upright. In Plate LXII. several snakes are represented in various forms, chiefly walking upright. One walking erect has its tail upheld by three human figures, while others are worshipping the snake itself.

Another tablet from the same Temple of Osiris represents another scene in Eden, where we have a man and woman engaged in watering and cultivating the pomegranate-tree, together with the crowned serpent walking upright, according to the statement in *Genesis* ii. 15–17.

That the Egyptians had traditions of the Noachian Flood, like all other nations, is quite clear, both from the monuments and the historians. The hieroglyphic inscriptions show the name of Noah variously written as *Nh*, *Nuh*, *Num*, and *Noa*, who was worshipped by them as 'the god of water,' and who has been identified by Dr. Birch with the deified man, who was entitled 'the father of the gods,' and 'the giver of mystic life to all beneath him.' According to Plutarch, the Egyptian tradition represents Noah, under the name of Osiris, enticed by Typhon into the Ark, which being closed, was forced out to sea through the Tanaitic mouth of the Nile; which things, he says, 'were done *upon the 17th day of the month Atayr, when the sun was in Scorpio*, in the 28th year of Osiris' reign.' (*De Iside et Osiride*, § 13.) This agrees in a remarkable way with the Biblical account of the Flood, where it is said, 'in the second month, the seventeenth day of the month, all the fountains of the great deep were broken up' (*Genesis* vii. 11). For the second month of the civil year amongst the Jews was reckoned from the autumnal equinox, and answers to our October, when the sun is *in Scorpio*.

Plato also mentions an Egyptian priest giving Solon an account of the great flood which once desolated their country, and seems to refer to the one recorded in Scripture. He represents the priest as telling Solon that—

> Long before the chief Deluge, a city of the Athenians existed, whose civil institutions are said to have been the most excellent of all that we have heard to exist under heaven.—*Timæus*, § 5.

Scripture appears to contain an allusion to the Pyramids, that wonderful feature in the land of Egypt, as the words of Job (iii. 13, 14), 'Now should I have slept; then had I been at rest with kings and counsellors of the earth who built *desolate places* for themselves,' evidently show. For the term 'desolate places' might be rendered literally as 'Pyramids,' which were for a certain period the mausoleums of the Egyptian kings. Ewald considers that the Hebrew *charabeth* or *parabeth* is a Semitic version of an Egyptian word which he translates 'Pyramids,' from *peram*, 'the lofty' or 'the mountain;' in which there appears to be an allusion to the Great Pyramid of Ghizeh, the most lofty building ever raised by man on earth, and the supposed burial-place of Pharaoh *Chu-fu*, whose name, together with that of *Nh-chufu*, has been discovered, though carved or painted in so rough a manner that the letters appear to be more like quarry-marks than anything else, in the interior of the building.

Some persons consider that there are other allusions to the Great Pyramid [1] in Scripture, *e.g.* in Job xxxviii. 5, 6; Isaiah xix. 19, 20; Jeremiah xxxii. 20; and should anyone desire to see the subject carefully and learnedly treated, I would refer him to two masterly works by Professor Piazzi Smyth, Astronomer Royal of Scotland, entitled *Life and Work at the Great Pyramid*, and *On the Antiquity of Intellectual Man*. He has there proved not only how far removed from savageism its architects were at a period when the world had recently emerged from the catastrophe of the Noachian Flood, but also the reasonableness and

[1] There are good grounds for believing that the Arabian shepherds were connected with the building of the Great Pyramid; and it is certain that we have obtained our 'Arabic numerals' from this people. Now it is curious to see that the principle upon which our figures were originally formed may be traced to the angles in any building of the shape of a pyramid, as the following diagram will show.

1 2 3 4 5 6 7 8 9 10

credibility of God having interfered to instruct and guide an architect who knew and worshipped Him, in the rearing of a grand symbolical building; suited, according to Divine foreknowledge, at least to suggest wiser views to some of our 'advanced thinkers' in their opposition to THE TRUTH OF THE BIBLE.

In the twelfth chapter of *Genesis* we have an account of Abraham's visit to Egypt, in which we find sufficient proof that Egypt had then become a settled and wealthy kingdom. The reigning Pharaoh is represented as treating Abraham well for Sarah's sake, and bestowing upon him many presents; amongst them are specified 'sheep' and 'asses.' This has given occasion to Von Bohlen of Germany to charge the writer with being guilty of a lie, as he says 'sheep and asses were especially odious to them on account of their colour.'[1] In reply to this we can point to an inscription on the tomb of Prince *Chephrenes* of the time of Pharaoh *Chu-fu* of the Great Pyramid, and therefore of an age prior to that of Abraham, in which the head shepherd is represented giving an account of the flocks and herds entrusted to his care; and amongst them are specified *asses* 760, and *sheep* 974. (Wilkinson's *Ancient Egyptians*, i. p. 130, 2nd series.)

Although there is little affirmative testimony from the monuments of Abraham's presence in Egypt, we may glance at what two historians have said on the subject. Thus Josephus, who, be it remembered, lived when the temple records of Egypt still existed, and whose watchful opponent, Appion, being an Egyptian priest, prevented his stating an untruth on such a matter, relates that—

Abraham taught the Egyptians arithmetic and the science of astro-

[1] *Die Genesis historisch-critisch erläutert.* Königsberg, 1835. Von Bohlen's work was answered by Drechsler of Leipsic in 1837. So great was his hostility to the sacred narrative, that in his Commentary on *Genesis* xliii. 6, he declares that—'The author represents Joseph commanding his servants to prepare flesh for food, in most *manifest opposition* to the sacredness of beasts among the Egyptians; their hatred to foreign shepherds being founded on the inviolableness of animals, especially of *sheep*, which were killed by the shepherds but accounted sacred by the Egyptians;' forgetting that he had just before asserted that there were *no sheep in Egypt!* Such is the consistency of those who appear to find delight in detecting what they ignorantly assume to be a flaw in THE TRUTH OF THE BIBLE!

nomy, for before he went to Egypt they were unacquainted with that sort of learning.—*Antiq. Jud.* i. 8, § 6.

And so Eupolemus, a Greek historian, who flourished three centuries earlier, says :—

Abraham was the inventor of astrology and the Chaldæan magic, and on account of his exalted piety was esteemed a god.—Euseb., *Præp. Evang.* § 9.

In accordance with the above, Osburn states, in his *Monumental History of Egypt*, chap. vii., that there does not exist a single record of any Pharaoh or subject with a date previous to the time of Pharaoh Amenemes I., head of the twelfth Dynasty, which, as we have already seen, began *circa* B.C. 2005, whereas tablets belonging to his reign with dates inscribed upon them are not uncommon. As Abraham's sojourn in Egypt is placed according to Hebrew chronology B.C. 2010, we may see in this an important synchronism between the two countries.

Although we might naturally expect to find among the monuments of Egypt some notice of 'the seven years' famine' of the time of Joseph, such as we shall be able to show from the archæology of other nations, nothing has yet been discovered which throws light upon the subject, although Bunsen triumphantly points to an inscription on the tomb of *Amenj Amenemha*, a prince of the reign of Sesortesen I., and therefore about B.C. 2000, which has been deciphered by the skill of Dr. Birch,[1] and which reads as follows :—

When in the time of Sesortesen I. the great famine prevailed in all the other districts of Egypt, there was corn in mine.—*Egypt's Place*, iii. 334.

This Bunsen pronounces to be 'a certain and incontrovertible proof' of the seven years' famine during the time of Joseph; while Brugsch, a far higher authority as an Egyptologist, which Bunsen certainly was not, wisely considers his assertion 'impossible for reasons chronological.' (*Histoire d'Égypte*, p. 56.) With this we cordially con-

[1] In the recently published *Memoir of Baron Bunsen*, his daughter writes:—'My father received a communication which greatly delighted him—that he had found an inscription on the tomb of an official in the time of Sesortesen, alluding to the great famine which had taken place—a confirmation of the opinion my father has held for years, that just under *that* king Joseph had lived!'—Vol. ii. p. 311.

cur; and independent of the fact that the reign of Sesortesen preceded that of Joseph's Pharaoh by about two centuries (according to Bunsen's scheme of chronology far longer, as he dates the reign of Sesortesen I. B.C. 2755, *Egypt's Place*, ii. 506), no two statements can be more unlike than the record on the tomb given above and what is said in Scripture respecting the seven years' famine; for whereas the inscription speaks of the great famine extending over all Egypt *save one district*, Scripture mentions that the seven years' famine was *in all lands but Egypt*, where it was unknown, through the inspired provision and careful forethought of Joseph (*Genesis* xli. 54–56).

No sooner had the poor Jewish captive interpreted the dream of the King of Egypt than—'the thing appeared good in Pharaoh's eyes, and he said unto his servants, Can we find such an one as this is, a man in whom the Spirit of God is? And Pharaoh said unto Joseph, Forasmuch as God hath shewed thee all this, see, I have set thee over all the land of Egypt' (*Genesis* xli. 37–41).

In order to understand the remarkable fact of a heathen king recognising at once the God of Israel, we must consider, first, who this Pharaoh really was. The universal tradition of the Greeks has handed down his name as *Apophis*, the most distinguished of the shepherd-kings who reigned in Egypt. George Syncellus, a Byzantine historian of the eighth century, says: 'All are agreed that Joseph governed Egypt under *Apophis*, and commenced in the seventeenth year of his reign.' What tradition and chronology have hitherto only implied, Egyptology has now amply confirmed, so that the assertion of Joseph being Viceroy of Egypt under Pharaoh Apophis is as much an historical fact as that Sejanus was Prime Minister to Tiberius in ancient, or William Pitt to George III. in modern times.

Some, however, have thought that because it is said in *Genesis* xlvi. 34 that 'every shepherd is an abomination to the Egyptians,' therefore the Shepherd Dynasty could not have been reigning when Joseph was made Viceroy of Egypt; but independent of the question whether that passage is a correct rendering of the Hebrew—for the words may be literally translated 'every consecrated goat is an idol or object of worship with the Egyptians' (the word for 'abomination' being commonly used in the Old

Testament for 'idol,' as *e.g.* in 2 Kings xxiii. 13)—we have the clearest proof from Scripture that Joseph's patron could have been none other than a shepherd-king. Else, what is the meaning of Joseph instructing his brethren, before introducing them to Pharaoh, to confess they were *shepherds*, and that in consequence of this Pharaoh made over to Joseph's father and brethren *the best* and richest parts of the land of Egypt for them to dwell in? (See *Genesis* xlvi. 31–35; xlvii. 1–6.)

Moreover, the fact of Pharaoh Apophis at once recognising the God of Israel as the true God when Joseph had interpreted his dream confirms this opinion in no slight degree. For we have ample proof that Apophis worshipped as his god the deity *Sutech*, who was then unknown to the Egyptians, and that this Sutech was looked upon by them as emphatically the god of the Syrians, from whose country Joseph had been brought, as it is written of Jacob: 'A Syrian ready to perish was my father, and he went down into Egypt, and sojourned there with a few, and became there a nation, great, mighty, and populous.' (*Deuteronomy* xxvi. 5). Now a fragment of one of the hieratic papyri relating to the Shepherd Dynasty in the British Museum, entitled *Sallier*, No. 3, will throw some light on this subject. The passage reads as follows:—

> It came to pass, when the land of Egypt was held by the invaders, Ra-skenen was ruling in the South, and Pharaoh *Apophis* was in his palace at Avaris. The whole land paid homage to him with their manufactures and all the precious things of the country. Pharaoh Apophis had set up *Sutech* for his Lord; *he worshipped no other god in the whole land.* While Apophis was celebrating the dedication of his temple to *Sutech*, the ruler of the South prepared to build a temple in opposition.

This noticeable fact of Pharaoh Apophis having been devoted exclusively to the worship of Sutech has been confirmed by the discovery of a colossal statue at Avaris, with the following inscription on the right shoulder:—

Pharaoh Apophis, worshipper of the god Sutech.

Hence, as Dr. Brugsch well observes in his *Histoire d'Égypte*, p. 79:—

> The mention of this god in combination with the shepherd king proves most clearly what is stated in the papyrus concerning Apophis having been specially devoted to the worship of this god, to the exclusion of all the other deities of the whole country.

After the expulsion of the Shepherds from Egypt, *Sutech* for a time assumed another form and meaning. Regarded as an opponent of the gods of the country, his name was destroyed from almost all the monuments. An ass was to the Egyptians a type of their northern enemies in Syria, so Sutech was represented with the head of *an ass*; the Egyptian name of which, *Iao*, is the very same word as the Greeks employed to designate 'the God of the Hebrews.' Hence Dr. Birch is, I think, fully warranted in considering that the word *Sutech* denotes 'the true God, the one only God, as distinct from all other deities.' Diodorus declares that when Antiochus Epiphanes, B.C. 170, entered the Temple of Jerusalem—

He found the figure of a man carved in stone sitting upon *an ass*, whom he took for Moses who built Jerusalem.—*Fragm.* lib. xxxiv.

History tells us that the early Christians were mocked in a similar manner. Amid the ruins of Hadrian's palace at Rome (his reign is dated A.D. 117–138) there has recently been discovered a representation of a human figure crucified with *an ass's head*, with this inscription underneath :—

Alexamenos adores his God——

and so Tertullian writes at the close of the second century :—

A new report of our God hath been lately spread in this city (Rome) since a wretch issued a picture with some such title as this, *The God of the Christians conceived of an ass.—Apolog.* chap. xvi.

This interpretation of the deity *Sutech*, who appears to have been alike the God of the Jews and the Shepherds, serves to explain an inscription which has been discovered at Thebes of the time of Pharaoh Manepthah, who is represented as worshipping, together with other Egyptian deities, 'the god Sutech of Avaris.'[1] Ewald asserts that *Avaris* means philologically nothing less than 'the city

[1] Four centuries intervened between Pharaoh Apophis and Pharaoh Manepthah, during which time *Sutech* had been admitted into the Egyptian Pantheon, just as Tiberius proposed that Christ should be admitted into the Roman Pantheon. Hence we find the Temple of Abu-Simbel consecrated by Ramessu the Great, Father of Pharaoh Manepthah, to the four chief deities of Egypt at that period of history —viz. Ammon, Phthah, Ra, and *Sutech*.

of the Hebrews.' (*Geschichte des Volkes Israel*, p. 450.) And De Rougé deduces from the hieroglyphic inscriptions that Avaris is the same as the Scripture Zoan, now called Tanis; Zoan in Hebrew signifying 'motion,' it is the proper equivalent for Hawar or Avar, *i.e.* Avaris, which means 'the place of departure' from which the Israelites went forth at the time of the Exodus. (*Revue archéologique* for 1861, p. 250.) Hence the inscription referred to above as 'the god Sutech of Avaris' might lawfully be rendered as

JEHOVAH, THE GOD OF THE CITY OF THE HEBREWS.

Pharaoh's recognition of the God of the Hebrews as enabling the Jewish captive to interpret his dream, is followed by the acts which are mentioned in *Genesis* xli. 42–5 :—

> And Pharaoh took off his ring from his hand, and put it upon Joseph's hand, and arrayed him in vestures of fine linen, and put a *gold chain* about his neck; and he made him to ride in the second *chariot* which he had, and they cried before him, *Abrech*; and he made him ruler over all the land of Egypt—and called Joseph's name *Zaphnath-paaneah*; and he gave him to wife Asenath, the daughter of Poti-pherah, Prince of On.

In Plate LXXX. of Wilkinson's *Ancient Egyptians* there is a picture of a monument at Thebes representing the investiture of an officer of high rank in the presence of Pharaoh Seti, the father of Ramessu the Great; he is seen clad 'in vestures of fine linen,' and Pharaoh's servants are placing 'a gold chain about his neck,' exactly as had been done to Joseph three centuries before, at the command of the reigning king.

Professor Huxley, in his address to the clergy at Sion College in November 1867, assumed that because Joseph is represented as riding in 'a chariot,' and therefore the Egyptians must have employed horses at the time, whereas in the time of Abraham, when they were in a high state of civilisation, they had not possessed horses, therefore he 'supposes a great interval must have elapsed' between the two periods. I do not quite see the force of this argument, but I think the monuments show an exact agreement with Scripture on this subject which is worthy of note. *E.g.* It is as natural an inference to draw from the absence of 'horses' in the gifts which Pharaoh

bestowed upon Abraham, that at that period the Egyptians did not possess them, as that they had acquired the use of such animals before the time of Joseph by the fact of his being 'made to ride in Pharaoh's second chariot.' Now it has been already seen (p. 237) that shortly before Abraham went down to Egypt, although the Egyptians possessed 'sheep and oxen and asses' in abundance, they did not possess horses. So the monuments that have been yet discovered show no sign of horses in Egypt until the reign of *Thothmes I.*, the son of the 'king which knew not Joseph,' who cultivated a particular breed of horses in the pastures of Lower Egypt where the Israelites had previously fed their cattle. (See Lenormant's *Manuel d'Histoire ancienne*, i. p. 238.) This of course does not forbid our belief that they were used by the Egyptians some time before, as Scripture shows they must have been when Joseph was made viceroy of the kingdom. Moreover, the title *ab-rech* (which was given to Joseph, and which is rendered in our translation of *Genesis* xli. 43, 'they cried before him, *ab-rech*, bow the knee,') is not uncommonly met with on the tombs of the ancient Egyptians, according to Osburn, who renders it from the hieroglyphic as 'pure prince.' (Osburn's *Israel in Egypt*, p. 43.) Concerning the name of *Zaphnath-paaneah* which Pharaoh bestowed on Joseph, the true interpretation of which has exercised the ingenuity of so many from the time of the LXX. in the third century B.C. unto the present day, I have met with upwards of twelve different renderings of this word, but the only one which commends itself as the most likely is that offered by Canon Cook, who considers it to mean 'Corn or Food of Life.' I have found this compound word in paragraphs marked Nos. 162, 164, and 167 of the Turin Papyrus, and consider this rendering of the term to be peculiarly suitable to the position of Joseph and the circumstances connected with his rise.[1]

[1] As some persons are apt to indulge in hasty conclusions with reference to identifying the Patriarchs of Scripture with certain hieroglyphic monuments, I feel it right to point out that the inscription on the tomb of *No-hotep*, an officer of the court of Sesortesen II., so well known in England since the publication of Rosellini's great work, cannot bear the character so commonly assigned to it of repre-

The Book of *Genesis* closes with this statement, that 'Joseph died being 110 years old.' Bunsen on the contrary, through disbelief of man ever becoming a centenarian, confidently pronounces Joseph's age at the time of his death to have been only 78! (*Egypt's Place*, iii. 342.)

Now there is reason to believe that after the time of Joseph the limit of longevity was considered by the Egyptians to be precisely 110 years; and the desire of attaining that age became quite proverbial amongst them, as the monuments and papyri seem to show.

Thus in the British Museum, besides several papyri to the same effect, there is a funereal inscription from the tomb of Raka, an officer of the court of Pharaoh Ramessu the Great, fourteenth century B.C., which reads as follows:—

Adoration to Onnophris, who granted me repose in the tomb *after* 110 *years upon earth.*

In the Munich Museum, on a statue of *Baken-Konsoro*, High Priest of Ammon during the reign of Pharaoh Seti, father of Ramessu the Great, the visitor is thus apostrophised after the manner of the Egyptians:—

O child, or married man, whosoever thou art in this life, place thyself behind me, since I have been from my youth even unto hoary old age in the sanctuary of the Temple of Ammon in the service of my God. Oh! that he may grant me the happy life of 110 years.

There is another inscription in the British Museum which deserves note from the singularity of its being written on a hard black stone in *hieratic* characters in place of the usual hieroglyphics. It is dated the twenty-first year of Amenophis III., who reigned in the sixteenth

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senting the introduction of Jacob and his sons to Pharaoh as described in *Genesis*, notwithstanding the positive assertion of a recent German writer that it does so (see *Menes and Cheops Identified in History*, by Carl Von Rikart, p. 22), for these two reasons:—1st, Pharaoh Sesortesen II. was reigning about two centuries before the time of Joseph; and 2nd, the inscription, which accompanies the picture, to this effect, 'The delivery of the stibium-makers which the great chief of the *Jebusites* hath brought, even thirty-seven men of his tribe.' The word rendered 'Jebusites' is literally and phonetically '*Jebus*,' which is the same as 'Jerusalem,' according to *Judges* xix. 10; and this proves that it is a presentation of certain Asiatics, who dwelt then at the far-distant city of Jerusalem, as they did nearly 1,000 years later in the time of King David, according to 2 *Samuel* v. 6.

century B.C., and relates to certain benefactions promised to the objects of the charity 'during the days when they shall repose in the tomb *after* 110 *years*.'

The most interesting of these references to the limit of longevity amongst the Egyptians is found in a papyrus brought by M. Prisse d'Avennes from Egypt about thirty years ago, and now in the *Bibliothèque Nationale* at Paris. It appears to have been written during the reign of Pharaoh Assa, the last king of the Shepherd Dynasty, and who was on the throne at the time of Joseph's death. An extract from the papyrus reads thus:—

> Verily a son who obeys his father and does what is right is pleasing unto God. So shalt thou have health and long life, and the royal approbation in all things. Thou shalt attain *the age of* 110 *years* in the king's court among the nobles of the land.

After the death of Joseph the bondage of the children of Israel began. This is fully described in the opening of the Book of *Exodus* (i. 8–11), where it is said:—

> There arose a new king which knew not Joseph, and he said unto his people, Behold, the children of Israel are more and mightier than we. . . . Therefore they built for Pharaoh treasure cities, *Pithom* and *Raamses*.

I believe it to be as certain that the 'king which knew not Joseph' was Amosis, the head of the eighteenth Dynasty, and victor over the Shepherds, as that 'William the Conqueror' was the hero of the Norman Conquest. Moreover, I think there is as sure proof from Scripture, the Egyptian monuments, and Manetho's history,[1] that this event must be dated B.C. 1706, as that the crucifixion or 'the cutting off the Messiah' took place A.D. 29. And thus its perfect agreement in point of time with Hebrew and Egyptian chronology affords one of the many conclusive proofs of THE TRUTH OF THE BIBLE.

Hence we naturally expect to find the names of 'Pithom' and 'Raamses' occurring at this period; nor are we disappointed. The name 'Pithom' has been identified with the *Pâ-chtoum en Zâlou*, *i.e.* 'the treasure-city or fortress of Thom built by foreign captives.' This name occurs in the annals of Pharaoh Thothmes III., grandson of the

[1] See Brugsch, *Histoire d'Égypte; Canon chronologique des Rois d'Égypte de Mènes jusqu'à Nectanebos II.*

'king which knew not Joseph' (see Brugsch, *Geograph. Inscrip.* iii. 21); as also two centuries later in the sixth Tableau of the grand hall in the Temple of Ammon at Karnac of the time of Pharaoh Seti I.; and there can be little doubt but that it refers to the treasure-city built by the captive Israelites.

Concerning the other name of 'Raamses,' many contend[1] that 'the king which knew not Joseph' must refer to one of the Pharaohs of the Ramessu Dynasty, when that name is first met with amongst the kings of Egypt. But history and chronology, as well as philology, show that this is a grave error. For if we regard the Hebrew mode of spelling the name, we find it written RHMSS, and pronounced probably *Ramess*. So on the Egyptian monuments we find a name exactly like it at this period of history, and in a position which would naturally account for one of the 'treasure-cities' being called after him. The names of one of the sons of the 'king which knew not Joseph,' Pharaoh Amosis, reads *Ra-MSS*, whereas the Pharaohs of the House of Ramesses, who reigned two centuries later, have commonly the final *u* at the end of their names; so that the exact way of rendering that name in English would be rather *Ramessu* than *Raamses* or *Ramesses*. And thus it is seen that the Hebrew name as it is written in *Exodus* i. 11 is more like that of the son of Amosis, which is thus inscribed on his cartouche *The*

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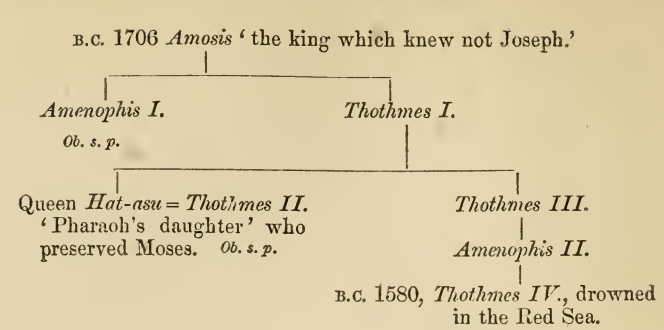
[1] M. Chabas, in his *Mélanges égypt., Deux. Série*, p. 164, declares that 'the hypothesis of the existence of a place named *Raamses*, at an epoch anterior to the Pharaohs of this name, rests absolutely upon nothing, and can have been ventured upon only by writers very little versed in Egyptian archæology.' However distinguished M. Chabas may be as an Egyptologist, I cannot regard him as a philologist of much weight, judging from his vain attempt to prove that some captives belonging to a nation called *Apu-ri-aa-a*, whose name has been found on the monuments of Thothmes III., Ramessu II., and Ramessu III., are the same as the *Hebrews!* Whereas philology, history, and chronology are completely subversive of this untenable theory. Further, M. Chabas, in attempting to criticise the niceties of a language other than his own, has shown that he is by no means a safe guide. *E.g.* in a recent letter to the *Egyptological Journal of Berlin*, he wishes to show the force of the English verb to '*break*;' and affirms that the English use it on this wise: '*to break one's mind, to break an opinion, to break a business, to break bulk*, &c.!' (See *Zeitschrift für Ägyptische Sprache*, Juni 1870, p. 82.)

King's Son Ra-MSS everliving, than that of the subsequent line of Pharaohs. (*Königsbuch der Alten Ägypter*, von C. R. Lepsius, Tafeln xxiii. xxx.-xxxiii.)

It may be safely assumed, by comparing *Exodus* i. 10, *Acts* vii. 22, *Hebrews* xi. 24–26, that the sacred writers meant—1st. That Moses was reared as the adopted son of 'Pharaoh's daughter,' and would have succeeded to her throne had he not refused to be so called, 'esteeming the reproach of Christ greater riches than the treasures in Egypt.' 2nd. That 'Pharaoh's daughter' must have been a queen regnant in her own right after her father's death, as none but such could have compelled so jealous a priesthood to train her adopted son 'in all the wisdom of the Egyptians.' 3rd. That Moses' fame as being 'mighty in deeds' refers to his position in Egypt, and long before he became leader of the Israelites.

Now it can be shown from the monuments that in the whole line of Pharaohs, from Mizraim the proto-monarch, 'which is Menes' according to Syncellus' Canon of the Kings of Egypt, down to Alexander the Great, B.C. 2350–323, there is only one *queen regnant* whose name appears as such during that long period of time. Her name is read on the monuments as *Hat-asu Numpt-amun*, and she appears exactly in the place we should have expected to find her from the account in *Exodus*, being, it is believed, the grand-daughter of the 'king which knew not Joseph.' She reigned for many years in Egypt, first in the name of her father, then conjointly with her husband, and subsequently in the name of her younger brother Thothmes III., who, after his sister's decease, sought to erase every sign of her rule, either through revenge at her having offered the succession to Moses, or from some other cause of which we are not aware.

The following genealogical table will explain the order of succession among the Pharaohs during the bondage of the Israelites in Egypt; though, from the confusion in the lists of the Greek authors who have written on Egyptian history, it is not quite clear how the genealogy of these Pharaohs actually stands.



This great queen is invariably represented on her monuments with a beard, to denote that she was sovereign in her own right, as Queen Victoria is of Great Britain. She erected two obelisks at Thebes in memory of her father, one of which is still standing, and the fragments of the other are scattered all around. The standing one, the second largest,[1] and certainly the most beautiful obelisk in the world, is formed of a single block of red granite highly polished, with reliefs and hieroglyphics of matchless beauty. The inscription on the plinth states that it was commenced in the fifteenth year of Queen *Hat-asu's* reign, and completed in the following year. The number of labourers and skilled artisans required for the completion of such a work in so short a time sufficiently shows the power which this queen had at her command. On each side of the obelisk is a single inscription, in which it is stated that she reigned 'in the name of her father,' and amongst other titles which she bears, such as 'royal wife,' 'Queen of Upper and Lower Egypt,' is found the significant and well-known Biblical name of PHARAOH'S DAUGHTER.

The Temple of Deir-el-Bahari at Thebes is another monument due to the magnificence of Queen *Hat-asu*, whose warlike exploits are represented on the walls, which

[1] Queen *Hat-asu's* obelisk is 90 feet high. The highest known is that of Thothmes IV., which now stands opposite the Lateran Church at Rome, and is 102 feet in height exclusive of the pedestal on which it is placed, which raises it 45 feet higher. An inscription found in the Temple of Assasif speaks of Thothmes III. having erected 'two great obelisks 108 ells in height, *covered entirely with gold*, which Brugsch, *Hist. d'Égypte*, p. 109, thinks the same as those which Queen Hat-asu erected in memory of her father.

are sculptured with great skill and of astonishing size; and by which means we are enabled to understand the incidents of a campaign undertaken by the general of her army against Ethiopia, or, as some read it, *Arabia*. We know from the representations engraven on the walls of two chambers recently discovered, that victory crowned her arms with complete success. They show the Egyptian general, who may be none other than *Moses* himself, receiving the enemy's commander-in-chief, who presents himself as a suppliant before him, accompanied by his wife and *daughter*.[1]

I think it possible that this representation of the Egyptian general may refer to Moses himself; for Scripture shows that Moses was 'mighty in deeds' before he refused to be called the son of Pharaoh's daughter. Josephus and Irenæus alike relate the fame which Moses gained as general of the Egyptian army in a war with Ethiopia, which though encumbered with a good deal of romance, still serves to explain the statement in *Numbers* xii. 1, that Moses married a woman of that country. (See *Jos. Antiq.* ii. x. 2; and *Frag. de Perdit.* Irenæ. Tract. Ed. Grabe, p. 347.)

The fifth chapter of *Exodus* gives a specific account of the rigour of the bondage under which the Israelites suffered in being compelled to make bricks without straw. And the monuments afford strong proof of its historic truth. At the village of Gournou, near Thebes, there still exist the remains of a magnificent tomb belonging to an Egyptian noble of the name of *Ros-she-ra*, who was overseer of all the public buildings in Egypt during the reign of Thothmes III. during the time that Moses was in Midian, and the Israelites groaning in bondage. The paintings on this tomb, which are given with extreme accuracy in Lepsius' *Denkmäler*, Abt. iii. Bl. 40, afford clear proof of the Jewish captives being forcibly engaged in the task of brickmaking. There are several inscriptions on this monument, some of which read as follows:—

Captives brought by his majesty Thothmes III. to carry on the works at the temple of his father Amun.

[1] For a full account of these interesting memorials of Queen *Hatasu's* reign, see the *Aperçu de l'Histoire ancienne d'Égypte*, par Auguste Mariette Bey. Paris, 1867.

Moulding bricks for building a new magazine or treasure-city in Thebes.

The chief taskmaster says to the builders: 'Work actively with your hands. Be not idle. Let there be no giving in.'

Of the captives thus employed some are seen transporting clay in vessels, some mixing the clay with straw, while others are represented placing their bricks in rows so as to complete their 'daily tasks.' Some of them bear the unmistakable features of the Hebrew race; and among them four Egyptian taskmasters are seen as Scripture describes, so as to leave no room for doubt but that this tomb presents a striking commentary on the oppression of the children of Israel. Sir Gardner Wilkinson remarks that more bricks bearing the name of Thothmes III. have been discovered than of any other period.' And Rosellini adds, that 'the bricks which are now found in Egypt belonging to this reign *always* have straw mingled with them, although in some of those that are most carefully made it is found in very small quantities.'

If it be asked how the Israelites came to be so employed at Thebes, so far removed from the place of their original settlement 'in the land of Goshen,' at the head of the Delta, we can point to *Exodus* v. 12, where it is said that they 'were scattered abroad *throughout all the land of Egypt* in order to gather stubble instead of straw,' which will account for their being found at Thebes. And inasmuch as *Ros-she-ra* was chief architect of all the public buildings throughout Egypt, he would very naturally employ the captive Israelites wherever he required their services.

Although, as I have already pointed out, it is impossible to accept M. Chabas' reading of the *Apu-ri-aa-a* as the 'Hebrew' captives during their bondage in Egypt, it is possible that we have other proof of the existence of the Israelites there at this period of history besides that mentioned above. Some years ago the excavations at Thebes by Mariette Bey brought to light 'The Statistical Tablet of Karnac' from the ruins of a small temple built by Thothmes III. Dr. Birch, in the *Proceedings of the Royal Society of Literature* for 1861, p. 69, has given a complete and most interesting account of this monument,

and amongst the various tribes and prisoners and nations over which Thothmes III. had triumphed, he reads the name of *Hebu* as the seventy-ninth on the list. As we have proof of the Israelites being at the height of their servitude during this reign, it is no more than we might expect to find the name of the 'Hebrews' amongst other nations enslaved by this Pharaoh; and the tribe there mentioned as the *Hebu* probably refers to the Jewish people.

Besides 'Pharaoh's daughter,' the preserver of Moses, Scripture mentions another by the same title, which may afford additional confirmation to THE TRUTH OF THE BIBLE. She is described in 1 *Chronicles* iv. 18 as 'the wife of Mered' at the time of the Exode. This text has greatly exercised both Jewish and Christian commentators; and it is only in consequence of the key having been found to read the hieroglyphic characters that we obtain any probable solution. The verse may be literally rendered as follows: 'Now these are the sons of *Bithiah, the daughter* of Pharaoh, whom Mered took to wife; and she, who was a Jewish proselyte, bare Jered, who became Prince of Gedor, Heber, Prince of Socho, and Jekuthiel, Prince of Zanoah.' *Jehudijah* is thus rendered, as in the margin, 'the Jewess,' *i.e.* a Jewish proselyte. As an Egyptian lady of high rank who had married a Hebrew, she was so designated as having become a proselyte to her husband's religion and people. The name 'Bithiah' is written in Hebrew with the power of the English letters B T I H, and might be sounded *Betiah*. On referring to the plates of Lepsius' *Königsbuch*, which contains a complete list of all the Pharaohs and their respective families, we find the cartouches of Amenophis II., the father and predecessor of the Pharaoh drowned in the Red Sea, together with several of his children. All these have the usual hieroglyphic signs over them, such as 'royal son' or 'child of Pharaoh.' Nearly all contain the name of Amun, the chief deity of Thebes, to whom those who bore that name were specially dedicated; and the last one reads, *Amun* P. or B. T. H. The first character has the power of the letter P; but as both that and B are labials, we have the authority of the Armenians and other eastern nations, especially of the Copts, who retain something of

the language of their ancestors, the ancient Egyptians, for exchanging one in the place of the other.[1]

Admitting the lawfulness of this exchange, we find among the royal family of Egypt a name singularly like that which Scripture records as the wife of a Hebrew prince, and the daughter of a Pharaoh who was reigning not long before the Exode. Inasmuch therefore as Amenophis II. was the father of the Pharaoh drowned in the Red Sea, whose reign must have been a short one, as we infer from Scripture and learn by the monuments, we have very fair grounds for concluding that 'Bithiah,' the wife of Mered, was the daughter of Pharaoh Amenophis; and this incidental mention of her name confirms the historical TRUTH OF THE BIBLE.

A recently recovered record of the reign of Thothmes III., father of Amenophis II., makes mention of the nation of the *Caphtorim*, who are twice mentioned in Scripture, *Genesis* x. 13, 14, and *Deuteronomy* ii. 23,[2] and stated to have sprung from a common ancestor with the Egyptians in the person of Mizraim the grandson of Noah. They appear to be the same people as 'the Shepherd race' described by Manetho, who invaded Egypt more than once, until finally expelled from the country by the 'king which knew not Joseph' and his grandson Thothmes, III., during the period when the Israelites were in bondage in Egypt. Hence we are not surprised to find the *Caphtorim* amongst the nations which Thothmes III. conquered, as the following inscription from a stèle at Karnac shows :—

Discourse of Amun-Ra, Lord of the kingdoms of the world: Come to me! Leap for joy at beholding my favours, O son avenger Pharaoh *Men-Krb* (Thothmes III.) everliving. . . . . I am come! I have granted thee to strike down the people of the West; the CAPHTORIM and the Asiatics are in terror of thee. I have caused them to behold

[1] Plutarch says the Macedonians changed Φ into B, and pronounced *Bilip, Berenice*, &c., for Philip, Pherenice, &c. Quintilian confirms this by showing that the Latins said *suppono, oppono*, for *subpono, obpono*, and pronounced *optinuit*, though they wrote *obtinuit*. The Romans occasionally used B for V, as in *amabit* for *amavit*, *berna* for *verna*, &c., whence the jest of the Emperor Aurelian on his rival Bonosus, who was famous for being able to drink to excess without being intoxicated, *Non ut vivat natus est, sed ut bibat.*

[2] In *Amos* ix. 7 'the Philistines' are said to have descended 'from Caphtor.'

thy Majesty, which is like unto a strong young bull with sharp horns which one cannot resist.

A variety of incidents combine to prove that the grandson of this Pharaoh, who bore the same name, being commonly known as Thothmes IV., was the Pharaoh of the Exode. The monuments prove that his reign was a brief one, which agrees with the Scripture narrative of Moses' dealings with the infatuated king. A tablet between the paws of the Great Sphinx is one of the few monumental remains of this Pharaoh. Another inscription, discovered on a gigantic rock opposite the island of Philæ on the Nile, has this singular circumstance connected with it; after the usual boasting titles, it stops short suddenly with the disjunctive particle '*then*,' evidently pointing to defeat and disaster, which were the characteristics of this reign.

That Thothmes IV. was the Pharaoh lost in the Red Sea[1] appears to be confirmed by the fact that after all the careful researches of modern explorers, *no trace has been found of this king's tomb* in the royal burial-place near Thebes, where the sovereigns of the eighteenth Dynasty lie, though that of his successor, Amenophis III., has been discovered in a valley adjoining the tombs of the other kings. (See Wilkinson's *Thebes*, p. 88.)

This opinion is supported by our knowledge that the succeeding reign witnessed the beginning of a very remarkable change in the national religion such as we might expect, from the failure of the Egyptian priesthood to ward off

[1] In the year 1836, during the expedition of two iron steamers on the river Euphrates under Col. Chesney, a storm of so violent a nature arose, causing the death of twenty-two sailors, though only lasting twenty minutes, that it elicited from the captain of the *Tigris*, one of the two steamers, the following testimony to the possibility of such a storm effecting the miracle at the Red Sea:—'Had this terrible wind,' he writes, 'continued any time, it might have blown a fordable passage across the river five or six fathoms deep, thus forcibly reminding us of the account of the "strong east wind" blowing "all night," forcing a passage across the Red Sea.' (*Passages in the Life of a Naval Officer*, by Capt. E. R. Charleswood, R.N.) In confirmation of Thothmes, or, as it is sometimes written, Thothmosis, being the Pharaoh drowned in the Red Sea, Sir Gardner Wilkinson mentions that 'The Arabs have a tradition that the Exodus happened under King *Amioos*, a name very like Amosis or Thothmosis.' (*Ancient Egyptians*, i. 54.)

the heavy judgments with which their country had been visited by the God of Israel. Dr. Birch tells us that—

In the reign of Amenophis III., the worship of *Aten* or *Aten-ra*, the sun's disc or orb first appears. This name, which resembles that of the Hebrew *Adonai*, or Lord, and the Syrian *Adonis*, appears to have been a foreign religion introduced into Egypt, or else a part of the sun worship, which had assumed an undue influence or development.—*Archæological Journal*, viii. p. 405.

Moreover, Sir Gardner Wilkinson considers:—

Though Amenophis III. calls himself the son of Thothmes IV., there is reason to believe that he was not of pure Egyptian race. His features differ very much from those of other Pharaohs, and the respect paid to him by some of the 'stranger kings' seems to confirm this, and to argue that he was partly of the same race as those kings who afterwards usurped the throne, and made their name and rule so odious to the Egyptians.—*Wilkinson apud Rawlinson, Herod.*, Append. II. viii. § 2.

Now this implies that Amenophis III., who immediately succeeded Thothmes IV. on his overthrow in the Red Sea, was not his son, as is commonly supposed, and as such serves to explain a passage in *Exodus* xi. 29 relating to one of the judgments upon Egypt, where it is written:—

At midnight the Lord smote all the first-born in the land of Egypt, from the first-born of Pharaoh, that sat on his throne, unto the first-born of the captive that was in the dungeon.[1]

The testimony of Manetho, the chief historian of Egypt, sufficiently agrees with the Scripture narrative of the Exodus, though he confuses that event with the expulsion of the Shepherds, that we find him mentioning the leader of the Israelites by name as well as the country to which they went. He says that—

The Shepherds were subdued by Amosis and driven out of Egypt,

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[1] On the walls of the palace of Thothmes IV. at Luxor, there is a sculpture representing the birth of his eldest son, who subsequently perished with the destruction of the 'first-born.' His queen, named 'Mautmes,' is receiving a message from the god *Thoth* that she is to give birth to a child. Then the god *Kneph*, which signifies 'the spirit' or 'the breath of life,' takes her by the hand, while the goddess *Athor* puts life into her mouth for the future child. Queen Mautmes is then represented seated upon a stool, after the custom of the Egyptian mothers, as mentioned in *Exodus* i. 16. Two nurses are chafing the hands of the mother, while the new-born child is held by a third assisted by two attendants. Underneath priests and court-officials are saluting their supposed future king.

and shut up in a place called *Avaris* (the Biblical 'Zoan'), where they were subsequently besieged by Thothmes with 480,000 men, and that despairing of success, he compounded with them to quit Egypt with their families and goods, on which they departed, in number 240,000, and took their journey from Egypt through the wilderness of Syria, where they built a city and named it *Jerusalem*, in a country now called *Judæa*. . . . It was also reported that the priest who ordained their government and their laws was by birth of Heliopolis; whose name was *Osarsiph*, from Osiris, who was the god of that city, but that when he went over to these people, his name was changed, and he was called *Moses.*—*Manetho apud Josephus Contr. Apion.*, i. §§ 14, 26.

For centuries succeeding the Exodus no intercourse whatever, as we gather from Scripture, appears to have taken place between Israel and Egypt; and it is not until after the time of Solomon that we have any record of war between the two kingdoms. In the First Book of *Kings* (xiv. 25, 26) we read that—

In the fifth year of King Rehoboam, Shishak, king of Egypt, came up against Jerusalem. And he took away the treasures of the house of the Lord and of the king's house, and all the shields of gold which Solomon had made.

It is not merely that the reigns of Rehoboam, B.C. 976–959, and Shishak, B.C. 980–959, synchronise according to both Egyptian and Hebrew chronology; but the interest centres in the fact of a monumental record still existing in Egypt, which certifies the event exactly as it is related in Scripture. Champollion discovered on the outside wall of the great Temple of Karnac a monument containing a long list of towns captured and countries subdued. The captives, who are represented with shields on their breasts with the names of their respective nations, are ranged in two vast groups. Amongst them we recognise certain familiar Scripture names, which may be thus read: —Land of *Mahan-ma*, which Rosellini considers to be the 'Mahanaim' of *Genesis* xxxii. 2, a city belonging to the tribe of Gad.—Land of *Baitahuria*, supposed to be the same as the two 'Beth-horons,' which Solomon fortified, according to 2 *Chronicles* viii. 5.—Land of *Mak-tau*, same as the Megiddo of 2 *Kings* xxiii. 29, the scene of Joseph's defeat by Pharaoh-Nechoh.—The fourth and most interesting name is that of the 'Kingdom of Judah,' which is usually read as *Judah Melek*, *i.e.* 'Judah king;' but the final hieroglyph being a determinative, proves beyond

all doubt that it signifies, not the king, who was not made captive, but 'the kingdom of Judah' which Pharaoh-Shishak boasted of having subdued, which the Scripture record shows was done, when he took the golden shields from the king's palace at Jerusalem.

The next Pharaoh mentioned in Scripture is the ally of Hoshea, King of Israel, as described in 2 *Kings* xvii. 4 under the name of 'So, king of Egypt,' concerning which alliance we have the following singular confirmation. In the great palace of *Kouyunjik* near Nineveh have been discovered a large number of pieces of fine clay, bearing the impressions of seals, which had once been affixed to documents written on leather, papyrus, or parchment, specimens of which are now in the British Museum. The greater part bear Assyrian, Egyptian, or Phœnician symbols. Amongst them are two Egyptian impressions, with the name *Shabaka* in a cartouche, with an hieroglyphic inscription above, which reads *Netr-nfr-nb-ar-eht*, meaning 'the perfect God, the Lord who produces things.' This Pharaoh *Shabaka* is the same as the second king of the twenty-sixth or Ethiopian Dynasty, written by Manetho as Σέβιχως, in Hebrew סוא; by the LXX. Σηγῶρ, or Σωά; and translated in our English Bible as 'So.' This seal, therefore, assumes an important character, in showing the synchronism of the three monarchs of Assyria, Egypt, and Israel; as it must have been affixed to some treaty between the sovereigns of Egypt and Assyria after the 'conspiracy of Hoshea, king of Israel,' when, on his refusal to pay tribute to 'Shalmaneser, king of Assyria,' he sent 'messengers to So, king of Egypt,' for help.

In the Second Book of *Kings* xix. 9 another Pharaoh is mentioned under the name and title of 'Tirhakah, king of Ethiopia,' who assisted Hezekiah in his war with Sennacherib. This Tirhakah is the same as Manetho's last king of the twenty-fifth Dynasty, who reigned B.C. 703–677, the contemporary of Hezekiah, B.C. 726–697. The Egyptian monuments show that Tirhakah was a great conqueror, whose dominion extended from Ethiopia to the Mediterranean; and this is evidently referred to in Scripture from the fact of the King of Ethiopia being enabled to send assistance to the King of Judah in his

war with the King of Assyria. *De Rougé*, in the *Revue archéologique* for 1863, p. 94, observes that it is perfectly certain from the various *stèla* of the Serapeum, that the authority of Tirhakah was acknowledged at Memphis. And the *stèle* at the Louvre proves that Tirhakah was reigning there at the time when the birth of the sacred calf, the chief object of sacred idolatry, took place, according to the following inscription:—

In the twentieth year, and on the 20th of the month Mesori, in the reign of *Ra-nah-het*, King of Upper and Lower Egypt, son of the Sun, of the race of Psameticus, the translation of the living Apis to heaven took place. The escorting of this god to the good Amenti (his interment in the tomb) was in the twenty-first year, and on the 25th of the month Paophi. Lo! he was born in the twenty-sixth year of *Tirhakah, King of Egypt*. He was carried to the temple of Phthah at Memphis on the 9th of Pharmanathi of the same year. Done in the twenty-first year of Psameticus.—*Königsbuch der Alten Ägypter*, von C. R. Lepsius, p. 95.

Pharaoh-Nechoh and Pharaoh-Hophra are both mentioned by name in Scripture, and the references therein contained have received full confirmation, if not from the monuments, from the page of secular history. The Second Book of *Kings* (xxiii. 29) mentions King Josiah's march against Pharaoh-Nechoh, 'who slew him at Megiddo when he had seen him;' which agrees with Herodotus' account of this same 'Pharaoh-Nechoh having routed the Syrians at Magdolus (Megiddo), and afterwards took the sacred Cadytis (Jerusalem), a large city of Syria.' Josiah's death took place B.C. 609, and Pharaoh-Nechoh reigned, according to Egyptian chronology, B.C. 611–595; consequently Nechoh's Syrian campaign was in the second year of his reign.

Another Pharaoh is mentioned by name in Scripture, which affords a synchronism between the histories of Egypt and Israel. Jeremiah (xliv. 30) wrote as follows:—

Thus saith the Lord: Behold, I will give Pharaoh Hophra, king of Egypt, into the hand of his enemies, as I gave Zedekiah, king of Judah, into the hand of Nebuchadrezzar, king of Babylon.

Pharaoh Hophra, or Apries, as Herodotus calls him, ascended the throne B.C. 589, the same year in which the destruction of Jerusalem occurred; and the prophecy of Jeremiah was accomplished when Hophra, after reigning

for twenty-five years, was overthrown and put to death by Amosis B.C. 564, as the Greek historian relates.

Such are the results which the recently discovered science of Egyptology, not much more than half a century old, affords in confirmation of THE TRUTH OF THE BIBLE, and that still more important discoveries will be made in illustration thereof we can scarcely doubt. For it may be safely assumed, that every incident in the life of the Israelites in Egypt, every art employed in the fabrication of the tabernacle in the wilderness, every allusion to Egyptian rites and customs, finds some illustration in the monumental history of that country; and whenever the burial-places of Memphis and Thebes, Avaris and On shall be more fully explored, we shall possess a commentary of unrivalled interest and value upon the books of Moses, as well as of the later historical works of the Hebrew Bible.

ARCHÆOLOGY IN CONFIRMATION OF SCRIPTURE.

CHAPTER XII.

I PROPOSE in this chapter to show how the archæology of other nations besides the Egyptians confirms the historical statements of Scripture in respect to primitive times. The earliest archæological remains of any nation yet discovered is thought to be a brick found in the Biblical 'Ur of the Chaldees,' inscribed with *Cuneiform* characters; and the correct decipherment of these ancient stone records has now been accepted by the best linguists of Europe as a thing actually accomplished. Hence it may be safely assumed that in the most ancient form of the cuneiform characters we have inscriptions confirming THE TRUTH OF THE BIBLE which reach back almost to the time of the Tower of Babel; while the later cuneiform inscriptions, judging from recent discoveries amid the ruins of the long-buried cities near the Tigris, such as Nineveh, Khorsabad, and Kouyunjik, with their splendid palaces, their alabaster sculptures, and the marvellous vestiges of their wealth, as well as those from the far-famed Babylon on the Euphrates, have thrown great light upon the history of Israel at the time of her decline.

Sir Henry Rawlinson, in a letter to the *Athenæum*, August 29th, 1863, says:—

> Those who are interested in cuneiform research will be glad to hear that the Institute of France has just conferred its biennial prize of 20,000 francs on M. Oppert for his Assyrian decipherments, thereby guaranteeing in the face of Europe the authenticity and value of such labours, and putting to shame the continued scepticism of England.

It is related that when the discoveries of Layard and

Botta were first brought to light, the Bedouin Arabs were greatly astonished, exclaiming:—

Our fathers and we after them have for hundreds of years pitched our tents in those places, but without knowing that there was anything remarkable buried there; and now you Franks have no sooner arrived with your measuring-sticks than you have traced the plan of the country, and brought to light magnificent temples and numerous treasures. Is it your books or your prophets that have revealed these secrets to you?

Some of the inscriptions on the rocks of South Arabia in *Himyaritic* characters are probably as old as the earliest cuneiform, since the builder of the far-famed Dyke of Mareb is traditionally believed to have been *Sheba*, one of the sons of Joktan and brother of Peleg, in whose time the earth was divided (*Genesis* x. 25–8), which would give its date in the second century after the Flood, or circa B.C. 2300.

There are nearly fifty Himyaritic inscriptions amidst the treasures of the British Museum; and the authorities have published an account showing the antiquity of these inscriptions, which afford valuable confirmation to the truth of the earliest post-diluvian events recorded in the Bible. The *Himyaritic* language, so called from having been used by the descendants of *Himyar*, a Joktanite king of Yemen, is supposed to be a form of Arabic which preceded, and was ultimately superseded by the Ishmaelite Arabic, or language of the Hedjaz. The Himyaritic is closely allied to the *Ethiopic* and *Hebrew* tongues, and the Amharic has chiefly helped to interpret it. It is not improbable that it may contain remains of the language of the earlier races of Arabia, such as the *Adites* and *Amelikites*. (See the *Introductory Remarks to Himyaritic Inscriptions*, printed by the British Museum, 1863.)

The *Phœnician* inscriptions are far less numerous, and consequently afford less evidence of THE TRUTH OF THE BIBLE, than either of those already mentioned. Phœnician palæography had its origin in the middle of the eighteenth century, when Richard Pocock brought from the East a collection of inscriptions (subsequently placed in the Oxford Library and published in 1750) from the town of Citium in Cyprus, which in olden times was known to have been a settlement of the Phœnicians. In A.D. 1845 a tablet was discovered in pulling down a house in the city

of Marseilles[1] near the site of an ancient temple of Diana of Ephesus, the tutelary goddess, as Strabo says, of *Messalia* (the ancient Marseilles). The inscription was in Phœnician characters, and referred chiefly to the prices to be paid for victims of different kinds for the house of Baal. Out of ninety-four words in the inscription, no less than seventy-four occur in the Old Testament, many of which are peculiar to the Hebrew, and not found in any cognate language. (See Kenrick's *Phœnicia*, pp. 161 *et seq.*)

The above tablet, together with two important inscriptions and a seal engraved with Phœnician characters, are the only ones in that language which have yet been discovered that afford any evidence respecting THE TRUTH OF THE BIBLE.

I wish I could say as much for Mr. Forster's laudable endeavours to decipher 'the *Sinaitic* inscriptions;' but though anxious to render him all honour for his persevering efforts, and which were deemed sufficient, I believe, to satisfy so acute an intellect as that of the late Lord Lyndhurst, I fear he has failed to discover the right key for reading the writings on the rocks of Sinai; which may be shown as follows. In the Egyptian gallery of the British Museum there is the fragment of a rock with a Sinaitic inscription, which Mr. Forster reads thus:—

The people kicketh like an ass; the people drives to the water Jehovah.

According to the reading of Professor Beer, the sentence should be read:—

Omai, son of *Wâl*, desires that he may be remembered.

Now which is the most correct reading? Let us see. In Lepsius' great work the *Denkmäler*, Band xi. Abt. vi., there are several Sinaitic inscriptions, some of which are *bilingual*, *i.e.* having a Greek translation beneath. One of these, numbered 127 by Lepsius, has above it the outline of a man with his arms uplifted. The Greek transcript reads, in English, as follows:—

Let be remembered for good Aus, the son of Ers.

[1] A tomb was discovered at Marseilles a few years ago with a Hebrew inscription, bearing marks of the highest antiquity, and therefore much injured and defaced by the lapse of time; but the Hebrew words עבד שלומה 'subject of Solomon' could still be read without difficulty.

Beer translates the Sinaitic characters according to his alphabet thus :—

Let be remembered for good Aus, the son of Hers.

Forster renders the same sentence on this wise :—

The Prophet prayeth unto God, Aaron sustaining his hands upon a great hard stone.

These and other reasons seem to decide against Mr. Forster's mode of reading the inscriptions of Sinai, which are therefore useless in affording evidence to THE TRUTH OF THE BIBLE. Mr. E. H. Palmer is said to have discovered a key to read them on the ground of so many being bilingual,[1] but whether his alphabet is the same as Beer's I know not. Mr. Palmer considers them the work of an Aramaic commercial community who inhabited the peninsula for the first few centuries of the Christian era. Many of the writers appear to have been Christians, but the greater portion were evidently Pagan. And so Sir G. Wilkinson, finding similar inscriptions, each one commencing with the same word as the 'Sinaitic,' on the Egyptian side of the Red Sea, pronounces them to have been executed by a people who navigated that sea long after the era of the Exodus; and that the presence of crosses in the midst of the inscriptions argues that they belong to a Christian age. (See Rawlinson's *Herod.* ii. 320.)

The first event recorded in Scripture which archæology seems to confirm, relates to the Mosaic narrative of the Serpent and the Tree of Life.[2] And as we have already

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[1] Mr. Pierce Butler is reported to have discovered a *trilingual* tablet near the Wady Mahara, two of the inscriptions being Egyptian and the third in 'Sinaitic' characters. (See *Jewish Intelligencer* for October 1856, p. 309.) If a transcript of this tablet has been taken, the true value of the Sinaitic characters could be ascertained, since the reading of the hieroglyphic inscriptions may be now regarded as thoroughly established.

[2] It is interesting to know that Sir H. Rawlinson considers he has discovered evidence as to the scene of the Temptation. In a paper read at the British Association Meeting in 1870, on 'The Site of the Terrestrial Paradise,' he explained that the data upon which he formed his opinion were taken from some cuneiform tablets found at Nineveh, which were executed in the seventh century B.C., and these were copied from older tablets, some of which were at that time almost illegible by age. He concluded that the site of Eden had been in the land of Babylonia.

seen from the monuments of Egypt how the tradition of those incidents in the history of our first parents had been preserved amongst the Egyptians, so amongst other nations the abundant evidence we possess of their worship of the serpent implies the same in a greater or less degree. A recent reviewer of Furgusson's valuable *History of Serpent Worship* has only paraded his ignorance of the doctrine of the Fall, as well as his animus against THE TRUTHS OF THE BIBLE, when he objects to this sort of proof from well-known historical facts. He says:—

> The history of Serpent Worship, *strange as it may seem*, has been frequently paraded as a branch of the evidences of Christianity! The object of Bathurst Deane's work is to confirm the account given in Genesis of the fall of man, proving Serpent Worship to be the only universal idolatry, and to have preceded every form of polytheism, which can only be explained by the Scripture narrative. The aim of James Furgusson's is strictly historical, showing no partiality for the serpent of Scripture over the Naga cursed in the Mahâbhârata. The advantage in the enquiry of *this absence of bias* is immense! The result is a work which must form the starting-point for a new series of enquiries *into the ancient condition of man* (!!!).—*Cornhill Magazine*, May 1869, p. 626.

Had this writer partaken more largely of the tree of life than of that other tree containing the forbidden fruit, which is the universal inheritance of all men, he would not have committed himself in the way he has done. And though he is right respecting the different objects of the two works which he has named, the more extended our knowledge of the subject becomes, the more sure will be our conclusion, that nothing but the Temptation and the Fall, as recorded in the Bible,[1] can account for the universal prevalence of serpent worship in early days, and which continues amongst some nations, as those in Dahomey and in Oceana, as a living reality, down to the present time. Just as the author of the apocryphal work entitled *The Wisdom of Solomon* condemns the heathen of the Old World because 'they worshipped serpents void of

[1] A curious idol recently brought from India offers a proof of this. At the base is the tortoise of the Hindoo cosmogony, on which stands the elephant who supports the world. From the back of the tortoise rises a *tree*; and on the lotus flower which crowns the tree Vishnu with four arms is seated, while round the stem of the tree a *serpent* is twisted.

reason,' so we find amongst the aborigines of the New as clear a proof of their being in want of that excellent gift as any of the most advanced rationalists of our own day. *E.g.*, the principal deity in the Aztec Pantheon was the *Sun-Serpent*, whose wife gave birth to a boy and girl, who became, they declare, *the first parents of mankind!* This Aztec creed for the *Origin of Man* appears to be as reasonable a belief as that of a primitive sect called *The Ophites*, or Serpentinian Gnostics, who preferred, as Tertullian (*De Præs. Heret.* chap. cxlvii.) says, 'the serpent to Christ, inasmuch as the former brought the knowledge of good and evil into the world,'—or as any of the wild chimeras which are so confidently put forth by the sceptical anthropologists of the present day.

So with reference to the Noachian flood, by which the whole race of mankind, 'save eight souls,' were destroyed, it is not merely the universal consensus of all nations respecting its truth that concerns us now, but the fact that we have two voices from two nations of the heathen world, with an interval of 2,000 years in confirmation thereof.

I have before mentioned the Dyke of Mareb on the southern part of Arabia. One of its foundation stones is inscribed with the date '30;' other Himyaritic inscriptions have various dates, ranging from 30 to 640, at *Hisn Ghorâb* in the same country. If these dates refer to the era of the Himyaritic empire,[1] this would prove the Dyke of Mareb to be almost as old as the Tower of Babel, and nearly two centuries older than the Great Pyramid. According to Arab tradition from time immemorial, Noah after the Flood dwelt in Southern Arabia, where he ended his days. These traditions are restricted to the family of Shem. The sepulchre of Eber, his great-great-grandson, is shown to this day upon a promontory of the southern

[1] Ewald, writing in Hoefer's *Zeitschrift*, i. 295, on the Himyaritic language, thinks that the dates mentioned in the text refer to the years when the rupture of the dyke took place, while he admits the high antiquity of the inscriptions themselves. But the little likelihood of such matters being inscribed there, as well as the fact that some of them would thus be brought later than the time of Mohammed, is sufficient to prove them far older than the German critic is inclined to allow.

coast, and *Saba* or Sheba, the son of Joktan, the son of Eber and brother of Peleg, 'in whose days was the earth divided' (*Genesis* x. 25, 28), was the first king of the *Sabeans* and builder of the far-famed Dyke of Mareb. This fact, together with its destruction in the age of Alexander the Great by the Flood of Aram, has been the theme of Arabian history through all succeeding ages. The proper name Noah in its Arabic form occurs no less than four times, according to Mr. Forster's reading of the inscription, with the word Deluge on one side and a Wooden Ark on the other. What event so likely to be chronicled by this early descendant of Noah as the miraculous preservation of his great ancestor, the second father of the human race, amidst the waters of a drowned world?

The second inscription relating to this subject is the celebrated Apamæan medal. Falconarius,[1] who wrote fully on this matter two centuries ago, met with three of these coins, which were of brass and of the medallion size: one in the collection of the Duke of Tuscany; the second in that of Cardinal Ottoboni; and the third the property of Augustino Chigi, nephew to Pope Alexander VII. These coins appear to have been struck at *Apamæa*, on the river Mæander in Phrygia, during the reigns of M. Aurelius, Alexander Severus, and Philip, A.D. 244–249. The inscription on one side is AYT. K. IOYA. ΦΙΛΙΠΠΟΣ AYΓ. Upon the reverse is delineated a square box or ark floating upon the waters. Through an opening in it are seen a man and a woman; on the head of the latter is a veil. On the top of the ark there sits a dove, and flying towards it is another dove bearing an olive-branch in its mouth. Before the ark are two figures, a man and a woman, who appear to have quitted it and to have reached dry land. Upon the ark itself, underneath the persons there enclosed, the word NΩE is inscribed in distinct characters. And an inscription around the medal reads in English:—This medal was struck when Marcus Aurelius Alexander was a second time chief pontiff of the Apamæans.

As the genuineness of this medal has been attacked, it may be well to mention that Bryant, in the fifth volume of

[1] Octav. Falconerii Dissertatio de nummo Apameensi. Paris, 1684.

his *Ancient Mythology*, has carefully examined the whole question, and successfully vindicated its claim to our acceptance.

In *Genesis* x. 8–10, we read of Cush begetting Nimrod, whose kingdom was Babel, and *Erech* or *Urukh*, and *Accad* and Calnah in the land of Shinar. The excavations conducted by Messrs. Loftus and Taylor, in the ruined cities over the country near the mouth of the Euphrates, known in Scripture as 'Ur of the Chaldees,' the land of Abraham's birth, have brought to light the name of *Urukh*, which appears to have belonged to one of the earliest kings of the country as well as to one of the cities built by Nimrod, and known as 'Warka' in the present day. According to the inscriptions, it appears that the *basement* platforms of all the most ancient buildings throughout this entire region are the work of this king, who calls himself 'Urukh, King of Accad,' and is thought by Sir Henry Rawlinson to be the first monarch after Nimrod of whom any remains have been obtained. The inscription on one of the many bricks stamped with his name reads as follows :—

Urukh, King of Accad—The builder of the Temple of the Moon God.

Rawlinson thinks that Accad was the name of the 'great primitive Hamite race, who inhabited Babylonia from the earliest time—the great parent stock from which the trunk-stem of the Semitic tongues sprang.' Hence in the inscriptions of Sargon's reign the name *Accad* is applied to the Armenian mountains instead of the vernacular title of Ararat. (See note in Rawlinson's *Herodotus*, i. p. 109.)

It is uncertain at what period King Urukh reigned. Rawlinson, in his *Ancient Monarchies*, i. p. 103, dates it B.C. 2093, which would make him contemporary with Abraham's father, Terah; but the following inscription seems to warrant our bringing him nearer the time of Nimrod, whose reign was about B.C. 2200.

According to the Assyrian Tablets of the British Museum, *Asshur-bani-pal*, King of Assyria, son of Esarhaddon and grandson of Sennacherib, who reigned B.C. 666 642, in one of his Elamite wars recovered an image of the goddess *Nana*, which had been captured by the

Elamites 1,535 years before. This image had been carried from the Temple of *Bit-Khiliama* in the city of *Urukh*, and set up in the city of Shushan, the capital of the Elamites. After it had remained there 1,535 years, *Asshur-bani-pal*, King of Assyria, captured Shushan, and brought back the image of the goddess *Nana* from Shushan to Urukh, and set it up in the Temple of *Bit-Khiliama* once more. Supposing *Asshur-bani-pal's* expedition to have taken place in the second year of his reign, B.C. 665, the capture of the image 1,535 years before by Urukh, King of Accad, would show his reign to have been within the period B.C. 2200.

Genesis xi. 1–9 records the confusion of tongues, which historical event was preserved at Babylon, as Abydenus and other Babylonian authors relate; though they did not admit the Hebrew[1] etymology of the name of their metropolis; they derived it from *Babel*, 'the door of El,' or Saturn, whom Diodorus says was the planet most adored by the Chaldeans. The Talmudists affirm that the true site of the Tower of Babel was at *Borsil*, which the Greeks called *Borsippa*, a place about ten miles north of the ruins of Babylon. The Babylonian name of this locality is *Barzipa*, which M. Oppert considers to be the same as 'The Tower of Tongues.' The French expedition to Mesopotamia found at the *Birs Nimroud* (the most prominent ruin of old Babylon) a clay tablet, dated from *Barzipa* the 30th day of the 6th month of the 16th year of *Nabonid*, which has been interpreted by the genius of M. Oppert, and from which we give the following extract. The building referred to in the inscription is the same as that which Herodotus describes as 'The Tower of Jupiter Belus,' being written in syllabic characters B I T-Z I-D A, composed of the signs for *house* and *spirit*, the real pronunciation of which was probably *Sarakh*, 'Tower.' The Temple consisted of a huge building 600 feet in breadth, and 75 in height, over which were built seven other stages of 25 feet each, at the top of which was the Temple of Nebo. It is called in the inscription 'The

[1] The Jews interpreted *Babel* to mean 'confusion,' because Jehovah did 'there *confound* the language of all the earth.'

Temple of the Seven Lights (or Planets) of the Earth,' and reads as follows:—

Nabuchadnezzar, King of Babylon, shepherd of peoples, who attests the immutable affection of Merodach, the mighty ruler-exalting Nebo; the Saviour, the wise man who lends his ears to the orders of the highest god; the lieutenant without reproach, the repairer of the Pyramid and the Tower, eldest son of Nabopallassar, King of Babylon. . . . The Pyramid is the temple of the heaven and the earth, the seat of Merodach, the chief of the gods.—The Tower, the eternal house which I founded and built, I have completed its magnificence with silver, gold, and other metals, stone, enamelled bricks, fir, and pine. The one which is the most ancient monument of Babylon, I built it and finished it. The other, which is called *The Temple of the Seven Lights of the Earth*, is the most ancient monument of Barzippa. *A former king originally built it forty-two ages ago, but did not finish it; since which time people abandoned, without order expressing their words.*—Expédition en Mésopotamie, i. 200–208.

This allusion to the Scripture record of the confusion of tongues is the only one which has yet been discovered in the cuneiform inscriptions; and if we may reckon 'an age' as about thirty-eight years, and compute from the era of Nabonasar, B.C. 747, which was adopted at Babylon, just as the era A.D. is accepted by all Christians, we obtain B.C. 2343 as the date for the building of the Tower of Babel according to Babylonian chronology, which accords with that of the Hebrew Scriptures.

In *Genesis* xiv. we read of 'Chedorlaomer, king of Elam,' as the contemporary of Abraham. A name very similar to that has been discovered on the oldest bricks in Chaldæa, which is read by Rawlinson as *Kudur-mapula*, and the identification is thought to be confirmed by the fact that he is further distinguished by a title which is rendered 'Ravager of the West.' And the exchange of *mapula* for *laomer* may be thus explained. In the names of the kings, the latter portion is frequently dropped. Thus *Shalmaneser* of 2 *Kings* xvii. 3, becomes *Shalman* in *Hosea* x. 14; *Sharezer*, the son of Sennacherib, 2 *Kings* xix. 37, is the same as *Nergal-Sharezer*; *Merodach-baladan*, 2 *Kings* xx. 12, becomes *Mardocempal*, &c. &c. *Kudur-mapula* might therefore be styled *Kudur* or *Chedor* simply, and the epithet 'el-Almar' (the Red) may have been added to the name and subsequently corrupted into *Laomer*, which, as the orthography now stands, has no apparent meaning. Whereas *Keder-el-Almar*, *i.e.*

'Kedar the Red,' is a famous hero in Arabian tradition, and his history bears in many respects a strong resemblance to the Scripture record of this king.

In the fourteenth year of his reign, Chederlaomer is said to have smitten 'the Rephaims in *Ashteroth Karnaim*,' *i.e.* 'the two-horned Ashteroth'[1] (the *Astarte* of the Greeks), who was the principal female divinity amongst the Phœnicians, and prototype of Diana, in whom both the crescent moon and the horned ox became objects of idolatry, as *Baal* was the chief male divinity. The name 'Ashteroth' has been identified with *Ishtar*, as it appears on the cuneiform inscriptions among the lists of the great gods of Assyria. (See Rawlinson's *Early History of Babylon*, p. 23.) In a Himyaritic inscription on a stone in the British Museum the name of this goddess has been detected, which reads as *Athor*; and in the Egyptian gallery, on either side of a monument of the time of Thothmes III., grandfather of the Pharaoh drowned in the Red Sea, may be seen a figure of the same goddess *Athor*, with an orb upon her head, enclosed with the horns of the crescent moon, pointing upwards. Her name is also found on existing inscriptions in the Island of Cyprus, and also at Carthage, showing how widespread was the worship of this goddess. Roëdiger, in his Addenda to Gesenius' *Thesaurus*, p. 106, notices that in the inscription on the sarcophagus of King 'Ashmunazer,' the restoration of the temple of this goddess at Sidon is attributed to him and to his mother *Immiashtoreth*, who is specially described as 'Priestess of *Ashteroth*,' *i.e.* Astarte. This inscription will be noticed presently.

If Egyptology has not yet brought to light anything in confirmation of the 'seven years' famine' which afflicted 'all lands,' according to the Scripture narrative, the archæology of other nations bears very decisive testimony to the point, as certain Himyaritic inscriptions, as well as the annals of the Chinese, can show.

That eminent German scholar Albert Shultens, in his *Monumenta Vetustiora Arabiæ*, quotes from the 'Cosmo-

[1] Porter mentions having frequently met with sculptured images of 'Ashteroth Karnaim' among the ruins of the *Giant Cities of Bashan*.

graphy' of *Al-Kaswînî*, an Arabian writer of the fourteenth century, an inscription in Himyaritic characters, which he reports as having been discovered over the gateway of a castle near *Hisn Ghorâb*, about twenty miles east of Aden, in Southern Arabia, by Abderrahman, Viceroy of Yemen, seven centuries before his time, *i.e.* about A.D. 660. Shultens gives the inscription in Arabic and Latin, which in English reads thus:—

We dwelt at ease in this castle for a long period of time,
Nor had we any desire save for the luscious region of the vine;
Hundreds of camels came to us each day at eve;
Twice the number of our camels were our sheep:
We dwelt in this castle *during the seven years of plenty*;
Then came *the years of famine*, barren and burnt up;
When one evil year had passed another succeeded,
And we became as though we had never seen a glimpse of food.
They died, and *neither foot nor hoof remained.*
Thus fares it with him who renders not thanks to God;
His footsteps fail not to be blotted out from his dwelling.

There are strong reasons for believing that this is a contemporary record of the 'seven years' of plenty and famine which extended over 'all lands' during the time when Joseph was viceroy in Egypt. And the peculiar expression, which I have italicised, reminds us of what Moses wrote at the time when the Israelites were escaping from their Egyptian bondage:—'Our cattle also shall go with us; there shall not *an hoof* be left behind.' (*Exodus* x. 26.)

Pocock cites another Arabian writer named 'Firazabandi,' whose works contain a corroborative allusion to the seven years' famine of Joseph's time, according to the following account. 'Ebn Hesham,' says Firazabandi, 'relates that a flood of rain laid bare to view a sepulchre in Yemen (Arabia), in which lay a woman having on her neck seven collars of pearls, and on her hands and feet bracelets, and ankle rings, and armlets seven on each, and on every finger a ring, in which was set a jewel of great price, and at her head a coffer filled with treasure with this inscription' in Himyaritic characters:—

In thy name, O God, the god of Himyar,
I, Tajah, the daughter of Dzu Shefar, *sent my steward to Joseph,*
And he delaying to return to me, I sent my handmaid
With a measure of silver, to bring me back a measure of flour;

And not being able to procure it, I sent her with a measure of gold;
And not being able to procure it, I sent her with a measure of pearls;
And not being able to procure it, I commanded them to be ground;
And finding no profit in them, I am shut up here:
Whoever may hear of me, let him commiserate me;
And should any woman adorn herself with an ornament
From my ornaments, may she die no other than my death.

Of this very remarkable inscription I would observe that nothing is of more common occurrence in the awful records of famine than the barter of the precious metals, such as 'silver, gold, and pearls,' even in equal quantities, for a supply of the coarsest food; and the mention of Joseph's name, to whom this Arabian princess Tajah sent her steward and others to procure sufficient food to sustain life, which is shown in such an affecting way on the tablet, agrees perfectly with the Scripture record that 'all countries came into Egypt to Joseph to buy corn.'

Moreover, as I have before remarked, there are grounds for believing that the Chinese annals contain a record of this identical famine, which shows that it must have extended to the farthest extremity of Asia, in accordance with the statement in *Genesis* that its effects were felt in 'all lands.' In the archives of the Chinese Empire it is related that 'In the beginning of the reign of *Ching-tang* there happened a drought and famine all over the empire, *which lasted seven years*, during which time no rain fell.' (See *History of China, collected out of Martinus, Couplet, and Du Halde*, in Jackson's *Chronol. Antiq.* ii. p. 455.) The reign of *Ching-tang* was in the beginning of the eighteenth century B.C., and the 'seven years' famine in Egypt' took place B.C. 1796–1789, according to the Hebrew chronology; so that there are the strongest reasons for believing that the famine recorded in the Chinese annals affords another proof of THE TRUTH OF THE BIBLE.

From the time of the descent of the Israelites to Egypt until the Exode[1] we cannot expect to find in the archæology

[1] As an attempt has been made against the veracity of the Pentateuch, on account of the last eight verses in *Deuteronomy* recording the death and burial of Moses together with matters subsequent to that event, it may be well to point out one or two similar instances of concluding paragraphs being added by a later hand, without any doubt of the veracity of the works in question. Thus, in Paul Sarpi's

of any nation save one allusion to the various incidents mentioned in Scripture. We have seen in the previous chapter the testimony which Egypt by her monuments and papyri bears to the history of Israel as set forth in Scripture; and it is interesting to know that no sooner were the favoured race released from their predicted bondage than a Phœnician monument rises to view which confirms in a remarkable way the truth of Holy Writ.

The conquest of Bashan, begun under the leadership of Moses, and completed by Jair, one of the most distinguished chiefs of the tribe of Manasseh, is fully described in the fourth chapter of the Book of *Deuteronomy*. In narrating this event the historian mentions that Jair took no less than *sixty great cities* in the region of Argob, 'fenced with high walls, gates, and bars; beside unwalled towns a great many.' Such a statement that a small province measuring not more than thirty miles by twenty, about the size of an English county, could contain 'threescore fortified cities,' especially when the greater part of it was a wilderness of rocks, might naturally appear incredible to a less hostile critic to THE TRUTH OF THE BIBLE than Bishop Colenso. Yet what is the testimony of those who have visited the locality in respect to this very matter? The Rev. J. Porter says:—

> Mysterious, incredible as this seemed, on the spot, with my own eyes, *I have seen that it is literally true.* The cities are there to this day. Some of them retain the ancient names recorded in the Bible. The boundaries of Argob are as clearly defined by the hand of nature as those of our own island home.—*The Giant Cities of Bashan*, p. 13.

Mr. Porter calls attention to the accuracy of the description of the 'region of Argob,' as detailed in *Deuteronomy* iv. 4, 13, 14, in speaking of the *Lejah*, a

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Treatise on Ecclesiastical Benefices, chap. xii., where, after giving an account of the origin of Cardinals, the author concludes his work thus:—'Urban VIII., who reigns at present, gave them the title of *Eminence* by a solemn Bull.' Now Pope Urban VIII. began to reign A.D. 1623, *before* which time Paul Sarpi was dead. So in Sleidan's *De Statu relig. et reip. Car. v. Cæsare*, there is at its close, without any similar intimation preceding it, this sentence:—'Octobris die ultimo Joannes Sleidanus J.U.L. vir et propter eximias animi dotes et singularem doctrinam omni laude dignus, Argentorati decedit, atque ibidem honorifice sepelitur.'

vast field of basalt, placed in the midst of the fertile plain of Bashan, with an elevation of thirty feet above the valley and its border, as clearly defined by the broken cliffs as any shore-line. He observes:—

> Lejah corresponds to the ancient Argob. Now, in every instance in which that province is mentioned by the sacred historians, there is one descriptive word attached to it—*chebel*; which our translators have unfortunately rendered in one passage 'region,' and in another 'country,' but which means 'a sharply-defined border, as if measured off by a *rope*' (*chebel*); and it thus describes, with singular accuracy and minuteness, the rocky rampart which encircles the Lejah.—*Ibid.* p. 24.

In *Joshua* iii. 10 we read of the leader of the Israelites offering the people a proof of their being under the protection of Jehovah by predicting that He would 'drive out before them the Canaanites, and the Hittites, and the Hivites, and the Perizzites, and the Girgashites, and the Amorites, and the Jebusites,' all of which, as Scripture records, was literally and fully accomplished. Hence we are not surprised to learn that Procopius, who flourished in the sixth century, in his history of the Emperor Justinian and the war of Belisarius in Mauritanea (*Bell. Vand.* ii. 10), relates that—

> The Girgashites and the Jebusites, and other nations mentioned in the history of the Hebrews, formerly inhabited Canaan, and on their expulsion from that country by Joshua, first sought a settlement in Egypt, but not being admitted there, passed on through the north of Africa, building many cities, until they passed the Pillars of Hercules.

Procopius adds, further, that near a fountain in *Tingitana* (the present Tangiers), are two *stèla* of white stone, engraved with *Phœnician* letters thus inscribed:—

> WE ARE THOSE WHO FLED FROM THE FACE OF THE ROBBER JOSHUA, THE SON OF NUN.

It should be remembered that the expression 'from the face of the robber Joshua' is clearly a Semitic idiom, of which we have several examples in Scripture; as, *e.g.*, *Genesis* xxxvi. 6; *Exodus* ii. 15; xiv. 25—a strong argument in favour of the genuineness of the inscription, which is questioned by Kenrick, *Phœnic.* p. 67, and Ewald, *Gesch. Israel*, ii. 297. Moses Chorenenses, however, in his *History of Armenia*, i. 18, as well as Bochart, Grotius, Selden, and Huet in past times, and Rawlinson in the

present day, acknowledge the inscription as genuine; and, considering that Procopius was a heathen author, and therefore unlikely to record a forgery, and that, as secretary to Belisarius, he must have seen the monument with its inscription when he accompanied him on his expedition to Africa, we cannot doubt its genuineness, but accept it as an unexceptionable witness to THE TRUTH OF THE BIBLE.[1]

The story of Samson having placed firebrands between the tails of foxes, and turned them into the corn-fields of the Philistines, as recorded in *Judges*, chap. xv., seems to have a confirmation from an archæological discovery made in London about three centuries ago. In Leland's *Collectanea*, at p. lxx., is a copper plate representing a brick of Roman make, found twenty-eight feet below the pavement of the metropolis in A.D. 1575. On this brick was inscribed, in basso-relievo, the figure of a man driving into a field of corn two foxes with firebrands fastened to their tails. This Roman custom was evidently borrowed from the Phœnicians, who probably perpetuated the memory of Samson's stratagem with the Philistines by one of a similar kind. Ovid mentions the same thing as an annual custom amongst the Romans at the feast of the *Vulpinalia* in the spring, when they were accustomed to let go foxes in the circus with firebrands tied to their tails, of which he thus asks the origin :—

> Cur igitur missæ, junctis ardentia tædis,
> Terga ferant vulpes, causa docenda mihi ?
> *Fasti*, iv. 681.

Bochart considers this Roman custom to have been derived from the Phœnicians, and to be traced to the history of Samson as recorded in the Bible. (*Hieroz.* pars 1, lib. iii. c. xiii.)

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[1] The Samaritans claim to possess a copy of the Pentateuch which may afford grounds for computing the length of Joshua's rule over Israel, which is not stated in Scripture. At the end of the aforesaid copy are the following words :—'I, Abishua, son of Phinehas, the son of Eleazar, the son of Aaron the Priest, completed this copy in the court of the Tabernacle, in the thirteenth year of the settlement of the Israelites in the land of Canaan.' (See Hengstenberg's *Dissertations on the Genuineness of the Pentateuch*, p. 77.) From a computation of what is said in other passages of Scripture respecting the duration of the Judges of Israel, we find that the 'thirteenth year of the settlement' synchronises with the death of Joshua.

In 1 *Samuel* v. 2–4 the Philistines are represented as taking the ark of the Israelites, and placing it in the temple of their chief deity *Dagon* at Ashdod, which is described as suffering defeat on account of the insult to Jehovah, as it is said, 'Dagon was fallen upon his face to the ground before the ark of the Lord, and the head of Dagon and both the palms of his hands were cut off upon the threshold: only the *fishy* part was left to him.' This shows the shape and form of the principal idol amongst the Philistines, the truth of which has been confirmed by Mr. Layard's discoveries at Nineveh and Kouyunjik, where he found several representations of this Philistine god, one of which, a figure as large as life, stands now in the British Museum. The head and mouth of a fish form, the shape of something like a mitre above a man's head, while its scaly back with fanlike tail falls as a cloak behind, leaving the human legs and arms exposed. We cannot fail to trace this mystic representation to Oannes, the sacred man-fish, or Noah of the Chaldeans, whom Berosus describes as possessing—

> The body of a fish, while under the fish's head he had another head with feet also below, similar to those of a man, subjoined to a fish's tail, whose voice was human, a representation of him having been preserved unto this day.—Eusebius, *Chronicon*, v. 8.

The most famous temples erected by the Philistines to Dagon were at Gaza, destroyed by Samson, as recorded in *Judges* xvi. 21–30, and also at Ashdod, as mentioned above, and also in 1 *Chronicles* x. 10.

One of the chief archæological treasures of the British Museum is a small black basalt obelisk which Mr. Layard found amid the ruins of Nineveh, lying ten feet below the surface of the soil. It was sculptured with cuneiform inscriptions on the four sides, having on each five small bas-reliefs, belonging to the time of Shalmaneser I., who reigned B.C. 860, about a century before the king of that name, who carried captive the ten tribes of Israel. From the inscriptions on this obelisk, which have been deciphered by Sir H. Rawlinson and the late Dr. Hincks, we obtain confirmation of several historical incidents which are casually alluded to in Scripture. Thus, *e.g.*, we find mention of *Benhadad*, King of Syria, allied with the Hittites, Phœnicians, and others, making three campaigns

against Shalmaneser, thereby showing the great power of Syria, notwithstanding their great overthrow by the Israelites, when 100,000 men fell in battle on one side in one day[1]—a greater slaughter than history records in any battle of modern times. Hazael's name is mentioned in the inscription, for Shalmaneser is represented as saying:—

I went to the towns of Hazael of Damascus, and took part of his provisions. I received tribute from Tyre, Sidon, and Byblus.

On the inscription there is also notice of *Ithbaal*, King of Sidon, who was the father of Jezebel, the wife of Ahab, and contemporary of 'Jehu, the son of Nimshi,' whose name has also been discovered on the obelisk, under the title of YAHUA (Jehu), THE SON OF KHUMRI (Omri). This substitution of the name of *Omri* for that of *Nimshi* may be accounted for, either by the importance which Omri had assumed as the second founder of the kingdom of Israel, when Jeroboam's dynasty had come to an end, or by the name of *Beth-Kumri* being only given to Samaria in the cuneiform inscriptions as the house or capital of Omri in which he once dwelt. (See Rawlinson, in *Journ. Roy. Asiat. Soc.*, Dec. 1851.)

It is interesting to see how faithfully the submissive Israelite is represented on the obelisk as distinct from the Assyrian. According to the Law, the Hebrew was forbidden to 'mar the corner of his beard' (*Leviticus* xix. 27); and hence in this and other monuments we can detect the peak-pointed beard of the Israelite as quite distinct from the square-cut beard of the Assyrian. And so M. Botta mentions that he frequently found at Khorsabad cuneiform inscriptions on the fringe of the garments of the Hebrew captives, as commanded by the Law of Moses, *Deuteronomy* vi. 6, &c. The reader will see how truly the historical incidents represented on the Nimroud obelisk harmonise with the Scripture statements as set forth in chapters xvi., xix., and xx. of the First Book of Kings.

On January 20, 1855, Dr. Thomson, who had resided as

[1] In 2 *Chronicles* xiii. 17, '500,000 chosen men of Israel' are said to have been slain at one time; but the reading of this is doubtful, or it may refer to the entire loss during the war.

a missionary in Syria for a quarter of a century, was present on the occasion of finding an extraordinary sarcophagus[1] in the neighbourhood of Sidon. The lid represented the bust of a colossal human figure, closely resembling in shape what is so commonly seen on ancient Egyptian mummy-cases. The figure is supposed to represent Sidon's far-famed goddess, called 'Ashtaroth' in Scripture, and 'Astarte' by the Greeks. On each shoulder of the figure is seated a dove, and the *tout ensemble* is striking and impressive. The material of the sarcophagus is blue-black basalt, intensely hard; and the lower part of the lid contains a most important Phœnician inscription in twenty-two lines, the letters of which are in as perfect a state of preservation as the oldest on the Egyptian monuments, which may be dated as early as B.C. 2000. Professor Dietrich, the editor of Gesenius' work, *Script. Ling. Phœn. Monum.*, has published a translation of it, from which I select the following portions, which seem to afford confirmation to an incident recorded in Scripture relating to the history of Israel.

In the month of Bul, in the 14th year of my reign, I King Ashmunazer, King of the Sidonians, son of Tabnith, King of the Sidonians, spake, saying, I am snatched away before my time, like a flowing river.

Then I have made this edifice for my funeral resting-place. It is I and my mother Immiashtoreth, Priestess of Astarte, who have built to the gods of the Sidonians in Sidon by the sea, the Temple of Baal-Sidon, and the Temple of Astarte, the glory of Baal, Lord of kings, who bestowed on us Dor and Joppa, and *ample corn-lands which are at the root of Dan.* Extending the power which I have founded, they added them to the Sidonians *for ever.*

Although the common Oriental boast of the Sidonian power lasting 'for ever' was speedily contradicted by the conquest of their country, and their entire cessation as a nation, like all the neighbouring kingdoms save the one favoured race of Israel, still enough remains to afford a clue to the time when the Sidonian power was at such a height as is implied by the language of the inscription. Ewald conjectures that King Ashmunazer reigned not long before the eleventh century B.C., or about the time when Samuel was judging Israel; which, if correct, would

[1] This sarcophagus is now in the Nineveh division of the sculptures at the Louvre.

make the inscription two centuries older than the Moabite stone, which has been erroneously pronounced the earliest specimen of Phœnician archæology extant; but there is good reason to believe it older than Ewald's conjecture allows. For it is plain from the eighteenth chapter of *Judges*, which records the conquest of Laish by the Danites, that at that time it belonged to *Sidon*, in accordance with the language of the inscription, adoring Astarte for having '*bestowed on us Dor and Joppa, and ample corn-lands which are at the root of Dan.*' Dr. Thomson bears testimony that 'the Hulêh spreads out from the very root of Dan (*Tell el Kady*), the richest grain-field that I am acquainted with in any country.' And though we know from Scripture that it was a sufficiently powerful kingdom to be entitled 'Great Zidon' (see *Joshua* xi. 8; xix. 28), which is confirmed by the fact of the 'Sidonians' being used at that time as the generic name of the Phœnicians or Canaanites (*Joshua* xi. 8), there is no reason to suppose that they ever recovered these 'ample corn-fields' of which they had been dispossessed by the conquering Israelites; and if so, the time of King Ashmunazer must be fixed to the sixteenth century B.C. in place of the eleventh, and this inscription must synchronise in point of antiquity with that other Phœnician one which has already been considered, of the Canaanites recording their own expulsion, when they 'fled from the face of the robber Joshua, the son of Nun.'

The learned world has been recently much excited by the discovery, in 1869, of what is commonly known as 'the Moabite stone,' and which, though valuable in confirming certain TRUTHS OF THE BIBLE, inasmuch as the period to which it relates falls within what the Rationalistic school consider 'the historic period,' *i.e.* subsequent to the time of Solomon, it is not of the same value as those which have been already considered, and which relate to times of far greater antiquity.

The circumstances of its discovery are as follows. It was first seen by the Rev. Mr. Klein, a Prussian by birth, in the employment of the Church Missionary Society, who saw it at the ancient 'Dibon,' on the east side of the Dead Sea, when it was in a perfect and unbroken state. Subsequently, the Arabs, on finding that the Franks were en-

quiring for it, broke it up into several fragments, which they hid in the granaries of the neighbouring villages. By the tact and perseverance of Captain Warren, R.E., the agent of the Palestine Exploration Fund at Jerusalem, and M. Ganneau of the French Consulate, the whole of the broken pieces have been recovered, and the inscription, consisting of thirty-four lines in Phœnician characters, as it appeared in its original condition, has been now made accessible to the world by the skill and talents of Mr. Deutsch of the British Museum, and Herr Schlottmann, Professor of Theology in the University of Halle. The subject of the writing is a record of the victories of Mesha, King of Moab, over Israel; and the following selection will show a very striking conformity with the historic statements of Scripture:—

1 Mesha, son of Jabin, King of Moab. My father reigned over Moab thirty years, and I reigned after my father. I erected this altar unto Chemosh, who granted me victory over my enemies the people of Omri, King of Israel, who, together with his son (*Ahab*), oppressed Moab a long period, even forty years. For though Chemosh was angry against his land, during my reign he was favourable to Moab as well as to the Temple, which Israel had continually wasted.

The men of Gad dwelt in the district of Kirithaim from olden times, and there the King of Israel built a fortress for himself, which Chemosh bade me go and take from him. Then I went in the middle of the night, and fought against Israel from break of day until noon, and slew all the people in the town, to the delight of Chemosh the god of Moab. I took from them all the sacred vessels of Jehovah, and offered them to Chemosh my god instead.

The King of Israel likewise built Jahaz and dwelt there when I made war upon him, and by the help of Chemosh drove him from thence.

The children of Reuben drove him from Horonaim, and Chemosh bade me go and fight against Horonaim, which I did, and took it, and I dwelt there for many years.

There are several things in this inscription, not only in the details, such as the mention of *Chemosh*, the national god of Moab, or, as it is called in 1 *Kings* xi. 7, 'Chemosh the abomination of Moab,' and of the capture of *Keriathaim*, which, three centuries later, Jeremiah (xlviii. 1, 23) specifies as a town belonging to Moab, that 'is confounded and taken,' but more particularly in its bearing throughout, which shows a close resemblance to the war between Israel and Moab, as described in the Book of *Kings*, where it is written:—

And Mesha king of Moab was a sheep-master, and rendered unto the king of Israel 100,000 lambs, and 100,000 rams, with the wool. But it came to pass, *when Ahab was dead*, that the king of Moab rebelled against the king of Israel.—2 *Kings* iii. 4, 5.

We learn from Scripture, that previous to the death of Ahab, there had been continual wars between Moab and Israel, and especially during the thirty-four years which comprised the reigns of Ahab and his father Omri, just as the inscription relates. At the time of Ahab's death, we find Moab paying an enormous tribute, which testifies at once to the severity of the terms imposed by Israel, and to the wealth of its natural resources, which could enable so small a kingdom, about the size of the county of Huntingdon, to raise annually such an impost, and at the same time support its own people in prosperity and affluence. It was not surprising, therefore, that the Moabites should have seized the moment of Ahab's death to 'rebel against the king of Israel,' and eventually with the success which the inscription represents *Mesha* to have obtained.

This success on the part of Moab seems to be confirmed by the incident recorded at the close of the third chapter of the Second Book of *Kings*, where it is said that King Mesha, in order to propitiate his god Chemosh—

Took his eldest son that should have reigned in his stead, and offered him for a burnt-offering upon the wall. And there was great indignation against Israel: and they departed from him and returned to their own land.

As there is no further mention of the Moabites in Scripture for sixty-five years, when they are represented as invading the land of Israel at the time of Elisha's death (2 *Kings* xiii. 20), it is a tacit admission that Mesha succeeded in throwing off the yoke of Israel as the inscription represents. And the truth of this record respecting the sacrifice of the son by his unnatural father has been confirmed by a cuneiform inscription which mentions this horrible practice.[1] Professor Grotefend of Hanover, in

[1] Another horrible practice of those times, though not so fatal, was the ordeal of fire, as Ahaz is said to have 'made his son pass through the fire according to the abominations of the heathen' (2 *Kings* xvi. 3). Dr. Brugsch says that the King of Persia to this day sends his son, seated on a black horse, to ride through the flames, in order to prove

deciphering the inscriptions of Behistun, has discovered one containing the offer of Nebuchadnezzar to let his son be burnt to death in order to ward off the affliction of Babylon.

The deportation of the ten tribes of Israel in the days of King Pekah, according to 2 *Kings* xv. 29, and 1 *Chron.* v. 26, is ascribed to two kings of Assyria, evidently successors, named 'Pul' and 'Tiglath-pileser,' or 'Tiglath-pilneser,' as it is variously written. The LXX. call *Pul* by the name of 'Phalôch' or 'Phalos,' which more nearly resembles the mode of writing the name in cuneiform characters, which in full reads as *Phul-lukha*. An inscription found on a pavement slab in an upper chamber of the north-west palace at Nimroud confirms the Scripture history in the following way:—

> The palace of Pul, the great King, the King of nations, King of Assyria, who by the help of Asshur has acquired a boundless empire. Conqueror of all lands from the rising to the setting sun. From the river Euphrates in the land of Syria I have subdued all the provinces of the land of Akkarri, the countries of *Tyre* and *Sidon*, *Samaria*, *Edom*, and *Palestine*, as far as the great sea (the Mediterranean) towards the setting sun; I imposed a fixed tribute upon them all.

Moreover, the Assyrian monuments show that there was a king of the name of 'Pul' reigning at Nineveh after Shalmaneser I. of the 'Nimroud Obelisk,' and before 'Tiglath-pileser,' in accordance with the Scripture statement, the date of whose reign may be computed from the Assyrian Canon, as some time between B.C. 800–750, and agrees with the date of the reign of Pekah, King of Israel, B.C. 758–738, thereby affording another of the many instances of the harmony between the chronology of the kingdoms of Assyria and Israel.

In the British Museum are four copies of the Assyrian Chronological Canon, all of which are more or less in a fragmentary and mutilated condition, but which have nevertheless been deciphered with great skill by that distinguished cuneiform scholar Sir Henry Rawlinson. In this Canon 'Tiglath-pileser's' name occurs as *Tigulti-pal-tsira*, King of Assyria, and in a very remarkable way, which seems to confirm the testimony of Berosus, the

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the sacredness of his character, and that 'passing through the fire' will not hurt him.

Chaldean chronicler, respecting this portion of Assyrian history. Polyhistor, who copied Berosus, relates that the first Assyrian Dynasty lasted until a certain *Beleûs* (Pul), who was succeeded by Belêtar, a common vine-dresser, having the care of the royal gardens; adding that this man, having obtained the kingdom in an extraordinary way, retained it in his own family until the destruction of Nineveh, more than a century later. Now it is certain from the Assyrian canon that *Belêtar*, or Tiglath-pileser (Belêtar being another mode of expressing *Palli-tsir*, which the Hebrews called 'pileser'), succeeded Pul on the throne of Assyria, after an interregnum of two or three years, thereby proving that he did not belong to the royal family, but was the chief of a new dynasty, which agrees with what both Berosus (Euseb. *Chron.* i. 4) and Herodotus (i. 95) assert, that there was a change of dynasty at this period of Assyrian history. This is strongly confirmed by the fact, that whereas previous kings of Assyria make a proud boast of their ancestors, Tiglath-pileser omits all notice of his, not even mentioning his father's name on any of his monuments. From the inscriptions, however, on these monuments, we learn that he conquered and received tribute from *Rezin of Damascus*, *Hiram of Tyre*, *Ahaz of Judah*, and *Menahem of Samaria*; but as Scripture names 'Pekah' as King of Israel when Tiglath-pileser marched against Samaria, it is supposed that the engraver of the inscription either wrote Menahem by mistake for Pekah, as he might have often before engraved the name of Menahem as King of Samaria, or else Pekah may have adopted that name, as Rawlinson in his *Bampton Lectures* suggests, in order to connect himself with the dynasty which he had displaced. The name of Menahem was found on a slab from the south-western palace of Nimroud, and is now in the British Museum. This, with the name of Jehu on the Nimroud obelisk, to which reference has been already made, and that of Hezekiah in the Kouyunjik records, are the only names, I believe, of the kings of Israel which have yet been discovered in the cuneiform inscriptions.

In the Second Book of *Kings* xvii. we read of Shalmaneser carrying the ten tribes of Israel into captivity in the

ninth year of Hosea, and placing them in Halah and Habor, by the river Gozan, and other cities of the Medes.

The mention of King Shalmaneser in Holy Scriptures affords occasion to call attention to a very striking proof of the value of the cuneiform inscriptions. At a meeting of the *Royal Geographical Society*, Jan. 9, 1865, Sir H. Rawlinson gave a description of Mr. J. G. Taylor's visit to the source of the Tigris, now called 'Zibeneh,' where he discovered two Assyrian monuments in two memorial tablets erected by *Asshur-izir-pal*, father of Shalmaneser King of Assyria. In the annals of the former, engraved upon the Nimroud monolith long known in England, but of which Mr. Taylor had never heard, it is stated that *Asshur-izir-pal*, having visited 'Zibeneh,' found there two memorial tablets erected by former kings to commemorate their conquest of the mountaineers—one belonging to Tiglath-pileser I., who reigned B.C. 1150, and the other to Asshur's immediate predecessor; mentioning that *Asshur-izir-pal*, in imitation of his ancestors, had carved his own image and titles on the rock. Thus Mr. Taylor, in ignorance of these facts, had actually found at the spot indicated on the Nimroud monolith the two tablets exactly answering to the description given of them, as proved by the paper casts of the inscriptions which he forwarded to England. 'To the most careless mind,' observes Sir H. Rawlinson, 'this coincidence between recorded facts and the result of actual discovery, must convey a proof of the correctness of cuneiform interpretation almost amounting to demonstration.'

It is admitted by all that the Karaite Jews in the Crimæa are descended from the ten tribes whom Shalmaneser carried captive, as stated in the Second Book of *Kings*. Their chief Rabbi showed the missionary Stern, so long captive in Abyssinia, when at *Bagtchiserai*, in the Crimæa, a very ancient document inscribed as follows:—

I, Jehudi, the son of Moses, the son of Jehudah the mighty, a man of Napthali, of the family of Shilmi, who was carried captive in the captivity of Hoshea the King of Israel, with the tribe of Simeon, together with the other tribes of Israel, who were carried away by the Prince Shalmaneser from Samaria, they were carried to Halah, to Habor (which is *Cabool*), to Gozan and to Khersonesus. Kherson was built by the father of Cyrus and afterwards destroyed, and again rebuilt and called the Krim, or Crimæa. And the Rock of the Jews is a fortification.

The Karaite Jews of the Crimæa declare that their separation from the rest of their brethren who were deported by Shalmaneser took place some time after that captivity in the reign of Chernan the Prince, during the period of Zerubbabel's Temple. And the inscriptions which treat upon the subject, and which have only recently been known to European scholars, vary in point of age from the eleventh to the fifth century A.D.; the oldest of them have been removed to the Imperial Library at St. Petersburgh, which now possesses no less than forty-seven fragments of the Karaite Pentateuch on leather and parchment, besides seventy-seven entire copies of the Old Testament, and a vast collection of Karaite works, together with 722 photographic copies taken from these inscriptions. Tischendorf and Olshausen have pronounced in favour of their authenticity and great antiquity. Professor Chowlson and Von Adolf Neubauer have given a complete account of them; from which it may be seen how the descent of the Karaite Jews deported by Shalmaneser is clearly made out. One of the inscriptions reads thus:—

We must inscribe here the wonders which God has done for us, as who can recount what has happened to us all during the 1,500 years we have lived in this exile? We have come into the hands of fire-worshippers and water-worshippers, they have plundered, wasted and shed our blood, they have taken our sacred books and have made mock of the same. Our latest enemy, Prince Gatam, would have destroyed us, had not God sent us help in our brothers the Chazars, who have become Jews, with their Prince Mibsam at their head. These have saved our sacred rolls and have captured the fortress Theodora in the year in which we are now living, 4565 of the Creation, and 1501 of our exile; thus may God still continue to help us and to send the prophet Elijah in our days! Amen.

Another inscription reads:—

I, one of the faithful in Israel, *Abraham ben Mar-Simchah* of Kertsch, an. exil. 1682, an. mund. 4746 (A.D. 986)—when the envoys of the Prince of *Rosh*, and *Meschech* (see *Ezekiel* xxxviii. 2 as in margin, and clearly pointing to Russia and Muscovy) came from the city of Kiow to our master the Chazar Prince David, in order to search into matters of religion—was sent by Prince David to Persia and Media, in order to purchase ancient copies of the Pentateuch, Books of the Prophets, and the Hagiographa for the Chazar communities. At Ispahan I heard that an ancient roll existed, which the children of Israel showed me when I came there. At the end of this roll was inscribed the travels of Rabbi Jehudah the corrector. The Jews told me that the father of Jehudah was the first inventor of the vowel signs and accents, in order to lessen for the pupils the difficulty

of learning to read the Sacred Scriptures.[1] I begged them to sell the roll to me, which they refused. So I copied the description word for word, attaching an explanation thereto of obscure words, but which were intelligible enough to me.

Then follows, word for word, the inscription given above, with this addition. After mentioning—

Halah, and Habor, and Gozan, to which places Tiglath-pileser had exiled the sons of Reuben and Gad and half the tribe of Manasseh, and permitted to settle there, and from which they have been scattered throughout the entire East, even as far as China——

it proceeds:—

The descendants of the ten tribes, under the Kings of Media, Cyrus and Cambyses, obtained possession of the Crimea and settled there; and thus the exiles of Shalmaneser and of Nebuchadnezzar were mingled together in one people.

The original, from which this inscription was copied in the tenth century, was possibly as old as the time of Ezra, B.C. 538, since the father of the writer is represented as having been the inventor of the vowel points when they are supposed to have been first[2] used by the Jews; though the Samaritans, as I have already pointed out (see note at p. 274), claim to possess a copy of the Pentateuch of far greater antiquity.

It is clear from Scripture that Shalmaneser, Sargon, and Sennacherib, Kings of Assyria, were all engaged in hostilities against Israel and Judah, as the cuneiform inscriptions show, and that *Tartan* (mentioned in 2 *Kings* xviii. 17, and by Isaiah xx. 1) designated either the name or the office (recent discoveries are in favour of the latter) of the general of the Assyrian army under these kings. 'Sargon's' name only occurs once in Scripture. In the inscriptions it is read as *Sargina*, while the town of Khorsabad, which he built and called after himself, was known as *Sarghún* to the Arabian geographers. Many

[1] Professor Cholson says: 'We know that about the middle of the tenth century certain Rabbis, envoys from Jerusalem, came to the Crimea to propagate their opinions; when they pointed the Biblical MSS., which were before without points.

[2] Dr. Lightfoot, a very high authority, considers the vowel points to be much older than the time of Ezra, affirming 'that the letters and vowels of the Hebrew were—as the soul and body of a child—knit together at their conception and beginning; and that they had both one author.'—Lightfoot's *Erubin*, or *Miscellanies*, chap. xxxi.

commentators, like Vitringa, Eichhorn, and others, have identified him with 'Shalmaneser;' while Grotius, Lowth, and Kiel think him the same as 'Sennacherib;' the inscriptions, however, clearly prove that he was one of the greatest of the Assyrian kings, coming in, probably, as the successor of the first and the father of the last. Sir H. Rawlinson thinks that, as in some of the inscriptions Sargon bears the *epithet* of 'Shalmaneser' attached to his name, by which he was better known to the Jews, the most reasonable way of reconciling the difficulty will be to suppose that Shalmaneser was appointed general of Tiglath-pileser's army B.C. 729, that he revolted against his sovereign five years later, but that he did not ascend the throne of Nineveh until B.C. 721, at which time he took the name of *Sargon*, as there are some incidental notices in the inscriptions of Sargon which favour this explanation. (See Rawlinson's letter to the *Athenæum*, No. 1805, p. 725.)

Others consider that the peculiar phraseology of 2 *Kings* xviii. 9, 10, implies that Shalmaneser was not the actual captor of Samaria; for whereas it is said, 'in the fourth year of Hezekiah, Shalmaneser came up against Samaria and besieged it,' it is added, 'at the end of three years *they* took it;' as if during the interval Sargon had replaced Shalmaneser on the throne of Assyria. Sargon, moreover, is described by Isaiah (x. 5–9) apparently as the conqueror of both Samaria and *Carchemish*; and an inscription found at Nineveh particularly specifies him as the conqueror of that city. A portion of it reads thus:—

The mighty King Sargon waged war against the wicked, and having overcome Pisiri, King of Syria, placed a governor in the city of *Carchemish*. I have added to the royal treasury 11 talents, 30 mina of gold, and 2,100 talents, 24 mina of silver,[1] as the spoils taken from Carchemish belonging to the country of the Khatti, near the river Euphrates.

Another inscription of King Sargon, now in the British Museum, offers the only specimen of Assyrian poetry, I believe, yet discovered. It is an invocation of the deity *Ussur*, called 'the god of binding contracts,' and reads as follows:—

[1] Reducing this to the value of our money, it is estimated that the spoil of Carchemish was equal to about 1,000,000*l.* sterling.

O Ussur, Lord of the wise; thou that art the sender forth of his strong hand,
For *Sargon* the mighty King, King of Assyria, high priest of Babylon,
King of Sumiri and Accad, construct thy buildings,
Even the dwelling-place of his splendour, may he multiply glory!
In the fulness of the power of *Bit Sicaddi* and *Bit Tsirra* establish his course of life,
Make firm the foundations of the earth!
Make perfect his chariots;
Confer on him the dominion of the world
And stability ever to be remembered.
Make bright his arrows; and grant him to conquer all his foes!

In 2 *Kings* xviii. 13, 14, we read of Sennacherib warring against Hezekiah, and with such success, that when the King of Assyria was engaged in the siege of *Lachish*, the King of Judah submitted and owned his offence, on which Sennacherib imposed a tribute of 'three hundred talents of silver and thirty talents of gold.'

Sennacherib, whose name is read on the monuments as *Tsin-akhierba*, signifying 'moon increases brothers,' was the most magnificent of the Assyrian kings, and the first who fixed his abode permanently at Nineveh, which he adorned with splendid buildings, his chief work being the grand palace of Kouyunjik, which covered a space of nearly nine acres, and contained sculptures of matchless beauty. In this palace Mr. Layard discovered the annals of his reign, by which it appears that in his third year[1] he overran the whole of Syria; and the following inscrip-

[1] The time of Sennacherib's reign has been confirmed by the record of an eclipse on a cuneiform inscription at Nineveh, which, in speaking of the commencement of his reign, says:—'In the month Tisri the moon was eclipsed, and the moon emerged from the shadow *while the sun was rising*.' It is not quite clear from Scripture when Sennacherib's reign began. It appears from 2 *Kings* xviii. 9, that Shalmaneser was King of Assyria in the fourth year of Hezekiah's reign=B.C. 723, and from v. 13, that Sennacherib was on the throne in the fourteenth of Hezekiah=B.C. 713, so that the commencement of Sennacherib's reign must be dated somewhere between 723–713. On referring to *L'Art de Vérifier les Dates*, I find there was a *total* eclipse of the moon September 12, B.C. 721, at six A.M., mean time for Nineveh; and inasmuch as this eclipse fulfils all the conditions required—viz. that it was *total*, and therefore more likely to be recorded than any partial one would be—that it took place in the month *Tisri* (answering to our month of September), *at the time of sunrise*, there can scarcely be a doubt but that it must be the same as the eclipse recorded in the cuneiform inscription as having been visible to the Ninevites at the commencement of Sennacherib's reign.

tions show an exact conformity with the text of Scripture.

In a bas-relief found amid the ruins of the palace, some Jewish captives are represented kneeling before the King of Assyria, over whose head is written:—

Sennacherib, the mighty king, monarch of the country of Assyria, sitting on the throne of judgment before the city of *Lachish*. I give permission for its slaughter.

Another inscription reads thus:—

Because Hezekiah, King of Judah, did not readily submit to my yoke, I took and plundered forty-six of his strong-fenced cities, and a great number of villages which depended on them; but I left to him Jerusalem, his capital city, and some of the inferior towns around it. . . . And because Hezekiah still continued to refuse to pay me homage, I attacked and carried away the whole population dwelling around Jerusalem, together with 30 *talents of gold and* 800 *talents of silver*,[1] the accumulated wealth of the nobles of Hezekiah's court. . . . I returned to Nineveh, and accounted their spoil for the tribute which Hezekiah refused to pay me.

In 2 *Chronicles* xxxiii. 11, the captivity of Manasseh in *Babylon* is recorded; but certain critics imply that as there is no mention of this in the contemporary Book of *Kings*, it cannot be historically true. Now if this were a forgery, surely the narrator would have sent Manasseh to Nineveh, and not to Babylon, where the kings of Assyria held their court for nearly a century after the death of Sennacherib. But THE TRUTH OF THE BIBLE on this very point has been amply confirmed by the Assyrian inscriptions, which prove clearly—

1st. That Esarhaddon, the son and successor of Sennacherib, and the contemporary of Manasseh, was the only one of all the Assyrian kings, as Rawlinson shows in his *Bampton Lectures*, who was *bonâ fide* King of Babylon as well as King of Assyria—who built a palace and occasionally held his court in that city, which subsequently became celebrated in the time of Nebuchadnezzar; and therefore that Manasseh was as likely to be carried captive to Babylon as to the metropolis of Assyria proper—viz. Nineveh.

2nd. That the annals of the reign of Esarhaddon prove

[1] The difference between '800 talents of silver' in the inscription and '300' in 2 *Kings* xviii. 14–16, may be explained by distinguishing between the *money* and *metal* of the Temple which Hezekiah 'cut off from the doors of the Temple and gave to the King of Assyria.'

distinctly that at one period of his reign Manasseh with other kings had been made prisoner by him. The inscription relating to this event is given in the *Revue archéologique* for 1864, and reads as follows:—

> I count amongst the prisoners of my reign twelve kings of the Hittites who dwelt beyond the mountains: Bahlon King of Tyre, *Manasseh King of Judah*, together with the Kings of the Isles of the Mediterranean Sea.

Such is the testimony which the Cuneiform inscriptions bear to THE TRUTH OF THE BIBLE, as set forth in the historical books of Scripture; and if we examine such a work as the prophecies of Daniel, we rejoice to find that the evidence from the same quarter is no less decisive here.

Thus in *Daniel* iii. 1 we read of the image of gold which Nebuchadnezzar set up in the plain of Dura being sixty cubits high by six in breadth. When Captain Selby was employed by our Government on the topographical survey of Mesopotamia, he discovered, at a distance of about twelve miles from the present ruins of Babylon, at a place called to this day 'THE WASTE OF DURA,' the remains of a column something resembling an Egyptian obelisk in shape, and about seventy feet in height, which he supposed to be the original foundation or plinth of the statue on whose summit stood the 'image of gold which Nebuchadnezzar had set up.'

Captain Selby has kindly favoured me with a private letter, detailing his reasons at length for coming to this conclusion. They are too long to be entered here, but he says that it was 'not until he had trigonometrically ascertained the bearing of this conical kiln-built brick ruin and its distance from the palace of King Nebuchadnezzar, that the conviction forced itself upon his mind that it was in all probability the very pedestal on which the statue of the king was placed.' Mr. Joseph Bonomi has adopted a similar view respecting the shape of Nebuchadnezzar's image as described by Daniel, which must have been not unlike the obelisks of Egypt, since the proportions stated in Scripture, the height being ten times that of the breadth, are wholly inconsistent with the proportions of the human frame.

Another monument, discovered by Captain Selby, of the figure of a large lion formed of black basalt, near one of

the ancient gates of Babylon, with an inscription on a stone close by to the following effect:—

I *Nabu-kuduri-uzur* cut the canal Shelby——

naturally recalls to mind the memorable scene described by Daniel when 'Darius the Mede,' who reigned in Babylon within thirty years after Nebuchadnezzar's death, was compelled by the rigid laws of the Medes and Persians to deliver his Prime Minister to the malice of his enemies, and to cast him into the den of lions.

In *Daniel* iv. 30 we read of the monarch's boast respecting his capital: 'Is not this great Babylon that I have built by the might of my power and for the honour of my majesty?'

Nebuchadnezzar, or, as it is written in cuneiform, *Nabu-kuduri-uzur—i.e.* 'Nebo, the protector against all trouble'—was the greatest and the most powerful of the Babylonian kings.

I have examined, says Sir Henry Rawlinson, speaking on this subject, the bricks *in situ* belonging perhaps to a *hundred different towns and cities* in the neighbourhood of Bagdad, and I have never found any other legend than that of Nebuchadnezzar, son of Nabopolassar, King of Babylon.

A statement of Megasthenes the historian, which has hitherto been deemed incredible, that Nebuchadnezzar built the walls of 'Great Babylon' in the short '*space of fifteen days*,' has been fully confirmed by an inscription on a tablet in the India House, recording the events of his reign thus:—

I *Nabu-kuduri-uzur*, King of Babylon, erected its walls; I finished it *completely in fifteen days*. Its roofs I covered in.

Another inscription from the treasure-house of what is now a great ruin near Babylon speaks in the same strain respecting this monarch:—

I am *Nabu-kuduri-uzur*, King of Babylon, the established governor, he who pays homage to Merodach, adorer of the gods, glorifier of Nebo, the supreme chief; he who worships the great gods; subduer of the disobedient; repairer of the Temples of *Bit-Shaggath* and *Bit-Trida*; the eldest son of Nabu-pul-uzur, King of Babylon.

The madness to which Nebuchadnezzar was subjected by God, as a punishment for his pride, which is so fully detailed

by Daniel (iv. 30–37), appears to have been very similar to what the Greeks called 'Lycanthropy,' wherein the sufferer imagines himself turned into an animal, and, quitting the haunts of men, insists on leading the life of a beast. This species of insanity accords with what the prophet relates concerning the judgment upon the King of Babylon, and is apparently alluded to in the great standard inscription, which has been read by Sir H. Rawlinson as follows:—

> For four years . . . the seat of my kingdom in the city which . . . did not rejoice my heart. In all my dominions I did not build a high place of power; the precious treasures of my kingdom I did not lay up. In Babylon, buildings for myself and for the honour of my kingdom I did not lay out. In the worship of Merodach, my lord, the joy of my heart, in Babylon the city of his sovereignty and the seat of my empire, I did not sing his praises, I did not furnish his altars with victims, nor did I clear out the canals.

Although there are two lacunæ at the commencement of this inscription, which the great skill of Rawlinson has been unable to decipher, it is evident that it records a suspension 'for four years' of all the works on which Nebuchadnezzar prided himself so much; and though the cause is not stated, there is no way of accounting for it but by some such extraordinary malady as that related by Daniel. Hence the observation of Professor Rawlinson in his *Bampton Lectures* that 'the whole range of cuneiform literature presents no similar instance of a king putting on record his own inaction.'

Moreover, the expression in the inscription of 'four years' seems to accord in a very remarkable manner with Daniel's statement that the judgment upon Nebuchadnezzar was to continue 'till *seven times* pass over him' (iv. 23). For Theodoret tells us that the ancient Persians, like the Chaldeans, used to divide their years into *two seasons* of winter and summer; hence the 'seven times' of Daniel must be reckoned in this manner, which will reduce it to three and a half solar years, and thus agree with the 'four years' mentioned in the standard inscription of Nebuchadnezzar's reign.

The cuneiform inscriptions afford valuable evidence respecting another of the kings of Babylon previous to its capture by the Medes and Persians. The fifth chapter of

Daniel records the prophet's prediction against the doomed nation, 'MENE, MENE, TEKEL, UPHARSIN,' when Belshazzar commanded Daniel to be clothed with scarlet, to have a chain of gold about his neck, and a 'proclamation concerning him that he should be the *third* ruler in the kingdom.'

Why was Daniel named by the King of Babylon 'the *third* ruler,' as the text states, when Joseph, under similar circumstances, was appointed by Pharaoh to be *second*, according to *Genesis* xli. 40? This has been a great difficulty with commentators. It was the great historical problem which had so long defied all solution on account of the apparent impossibility of reconciling the text with the statements of the Chaldean historians. Some years ago, however, a happy discovery by Sir H. Rawlinson solved all difficulties. In a letter to the *Athenæum* from Bagdad, under date January 25, 1854, he mentions having found on certain clay cylinders brought from the ruins of *Um-Queer*, 'Ur of the Chaldees' of Scripture, certain inscriptions which disclosed the fact that *Nabonnedus* (whom Berosus, the Chaldean historian, calls the *last* king of Babylon) had admitted his son *Bel-shar-ezar*, 'Belshazzar,' to a share of the government, as was frequently done both in the East and West. *E.g.*, we have historical and monumental proof that Nabopalassar admitted his son Nebuchadnezzar, Xerxes his son Artaxerxes, and Augustus his successor Tiberius, to share their power respectively during their lifetime.

Hence we are able to see the reason of Daniel being spoken of in Scripture as 'the *third* ruler' when he was made Prime Minister to the King of Babylon; for Berosus states positively that *Nabonnedus* the father escaped to *Borsippa*, now called 'Birs Nimroud,' previous to the fall of Babylon, where Cyrus found him, treated him kindly, and provided him with an establishment in Carmania, where he spent the remainder of his days. (See Joseph. *Contr. Ap.* i. 20.) His son *Belshazzar*, who was co-regent with his father, would naturally be reckoned *second* on that memorable night when the prophecy was delivered, and Daniel himself would of course be named as 'the *third* ruler in the kingdom;' and thus we have a very happy instance of the harmony between sacred and secular his-

tory, as well as a striking testimony to THE TRUTH OF THE BIBLE.[1]

On the death of Belshazzar, Scripture affirms that 'Darius the Median took the kingdom, being about sixty-two years old.' The obscurity of the Babylonian annals, through the fragmentary nature of the writings of the Chaldean historians which have come down to us, has occasioned three different hypotheses respecting 'Darius the Median' who succeeded Belshazzar on the throne. The *first*, which identifies him with Darius Hystaspes, who reigned over Persia and Babylon about twenty years later, rests on no sufficient evidence, and may be dismissed at once, notwithstanding the vigorous attempts of Mr. Bosanquet on the subject. The *second*, which Josephus in ancient, and Hengstenberg with others in modern times, have adopted, supposes him to be the same as Cyxares II., son of Astyages, the last king of Media according to general belief, whom Herodotus represents as dying without any male issue. But the only authority for this is Xenophon's romantic history of Cyrus, which is scarcely sufficient to warrant us in rejecting the evidence of the most authentic history, which makes Cyrus the successor of Astyages. The *third* and most probable hypothesis, therefore, is that which identifies 'Darius the Median' with Astyages himself, and which appears to satisfy all the conditions of the problem. The name *Astyages* was national, and not personal, having been identified by Rawlinson in cuneiform inscriptions with *Ashdahák*, 'the biting snake,' the emblem of the Median power. And the description of Æschylus' nameless king, as one whose 'feelings were guided by wisdom,' is applicable alike to the Darius of Scripture and the Astyages of secular history.[2]

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[1] De Witte, a distinguished German rationalist, says that 'the Book of Daniel is full of historical inaccuracies, such as are contained in no other prophetical book of the Old Testament;' but this was written before the decipherment of the cuneiform inscriptions, which have so strikingly proved their accuracy.

[2] Mr. Loftus discovered amid the ruins of *Warkah* a terrace forty feet in length, paved with bricks, each one bearing an inscription of *Cambyses, brother* of Cyrus, a personage of whom we have no historical notice any more than there is of 'Darius the Mede.'—See *Transactions of Royal Society of Literature*, 2nd Series, vol. vii. p. 46.

Moreover, there is reason for thinking that a Phœnician inscription proves the existence of an older Darius, before the time of Darius Hystaspes, as the scholiast (*ad Arist. Eccles.* 598) says that 'the Daric coins were named, not after Darius Hystaspes, but after another and *older* one of the same name.' On a cylinder now in the British Museum, there is the representation of a king contending with a winged human-headed bull and a griffin beneath the image of the god Ormuzd. 'The first word,' says Mr. Layard in his *Nineveh and Babylon*, pp. 606, 607, 'of the inscription is pure Hebrew, *Katham*, "the seal," and then follows the name of a man and of his father, which I am not able to decipher satisfactorily.' Adopting the principle of Gesenius' alphabet for the Phœnician characters, I venture to think that the inscription may be read as follows :—

The seal or sealed decree of Darius the son of *Artriti*——

'Artriti' being equivalent to *Ahasuerus*, as he is termed in *Daniel* ix. 1 : 'Darius the son of Ahasuerus, of the seed of the Medes, which was made king over the realm of the Chaldeans.'

The mournful prediction of the prophet Isaiah (xxix. 1) : 'Woe to Ariel,[1] to Ariel, the city where David dwelt!' which was so fully accomplished about a century after these words were uttered, in its complete destruction by Nebuchadnezzar, reminds us of a curious discovery in the records of English archæology.

About two hundred years ago, as a fisherman was dragging a brook in the county of Suffolk, his net was nearly broken by some heavy substance which he had fished up. On investigation, he discovered a singular-looking vessel, standing upon three legs, terminating with bulls' feet, which had on its outside the following inscription in Hebrew characters :—

The offerer is Joseph, the son of Rabbi Yechiel Sancto, who answered

[1] In this passage we have a case of synechdoche in 'Ariel' being used in place of *Jerusalem*. The word signifies 'the lion of God,' and was the name of the altar spoken of by *Ezekiel* xliii. 15, because it devoured the sacrifice offered on it; just as in *Revelation* xi. 8, and xvii. 18, Calvary is put for Rome, 'that great city which reigneth over the kings of the earth.'

and questioned the congregation as he thought proper. That he may behold *the face of Ariel* with the writing DATH YEKUTHIEL. And may righteousness deliver from death.

The Rabbi Yechiel named in the inscription was the author of a work on the Pentateuch under the title of DATH YEKUTHIEL, or 'The Law of Moses'—Yekuthiel being a name by which Moses is known in Rabbinical writings. The meaning of the expression 'that he may behold the face of Ariel' is thus explained. In order that the pious pilgrim to Jerusalem might enjoy a safe and prosperous journey to 'the city where David dwelt,' his son Joseph made the offering of that vessel to the English synagogue of which his father was chief Rabbi. And the purpose or use to which the offered vessel was to be put is explained in the last sentence, 'Righteousness delivereth from death,' which with the post-Biblical Jews means 'Almsgiving delivereth from death'—an inscription on every alms' receptacle to be found in the porticoes of every well-ordered synagogue. A sketch of the vessel containing the above inscription is preserved in the MSS. of the British Museum, and a very full and interesting account of it will be found in Dr. Margoliouth's *Vestiges of the Historic Anglo-Hebrews in East Anglia.*

Isaiah was likewise inspired to predict, nearly two centuries before it came to pass, that 'Cyrus,' King of Persia, would be the instrument for rebuilding Jerusalem and its Temple after the return of the Jews from Babylon (see chap. xliv. 28); and Ezra (i. 1) tells us how this was literally accomplished. That the subject of Isaiah's prediction, the son of Cambyses and grandson of Astyages, from whom 'Darius the Mede' 'received the kingdom,' was the same as he who, according to Ezra, released the Jews from their captivity at Babylon, is an historical truth as clear and convincing as that William Duke of Normandy, and William 'the Conqueror' are one and the same person. Yet the late Duke of Manchester adopted the strange idea that the Cyrus of Herodotus is the Nebuchadnezzar of Scripture—an hypothesis as extraordinary and incredible as that advanced by Mr. Bosanquet, to which I have already referred, that 'Darius the Mede' and Darius Hystaspes are one and the same!

Amid the ruins of *Murg-Aub*, about fifty miles from

Persepolis, on the road to Ispahan, is still to be seen the remains of a building resting on square blocks of what was once beautiful white marble, which rise in seven layers like an Egyptian Pyramid. The extent of the chamber, as described by Sir Robert Ker Porter, is seven feet wide, ten long, and eight high. The marble floor within was found to be perfectly white; otherwise the monument is black with age, and from the injuries it has received at the hands of barbaric spoilers. Here the mighty Cyrus was originally entombed, and the evidence of this seems perfectly satisfactory, as it bears to this day the name of the great King of Persia's tomb. No inscription adorns it, but both Sir R. Porter and M. Mortier discovered at *Murg-Aub*, the first over a carved representation of Cyrus, and the second on a standing pillar at the same place, a cuneiform inscription which reads thus:—

I am the powerful King Cyrus, son of Cambyses, the Achæmenian.

Darius, the son of Hystaspes, fifth in descent from Achæmenes, the founder of the Perso-Arian Dynasty, adopted the same policy towards the Jews which his predecessor Cyrus, sixteen years before, had done, by restoring to them the privileges which they had lost through the usurpation of Gomates the Magian, or 'Artaxerxes,' as Ezra calls him, who obtained the throne for a few months on the death of Cambyses the son of Cyrus, and who willingly listened to the enemies of a people which had welcomed Cyrus as their deliverer. (*Ezra* iv. 1–24.)

Previous to giving an inscription from the Behistun rock, which confirms the statement of Scripture respecting this portion of Persian history, a few words on this monument, so important to the archæologist, may not be uninteresting to my readers. The Behistun rock rises abruptly from the midst of an extensive plain on the western frontiers of Media to the height of 1,700 feet; about 500 feet high occurs the inscription, discovered in 1837 by the present Sir H. Rawlinson. It was an exceedingly difficult work to procure even a copy of it, as the French expedition, after spending a fortnight in vain at its base, had given it up, declaring that such a work 'could never be accomplished.' English perseverance,

however, overcame everything; but then came the more difficult task of deciphering the inscription and rendering it into English. After twenty years of unremitting toil this has been successfully accomplished by the skill of the discoverer. The Behistun rock bears the same value to the cuneiform which the Rosetta stone does to the hieroglyphic. Three different languages were found in the inscription, which proved to be Persian, Median, and Assyrian, and as none of these were known, the difficulty was still greater than in the case of the Rosetta stone, where one of the trilingual inscriptions was Greek. Nevertheless, Rawlinson's success was complete, and the subsequent discovery of the vase of Halicarnassus, now in the British Museum, where the name of Xerxes was found in the same trilingual characters as on the Behistun rock, together with a fourth repetition of the name in hieroglyphics, confirmed the truth of Rawlinson's discovery. In the centre of the inscribed tablets, nearly forty in number, is a representation of Darius Hystaspes resting his foot on the body of Gomates the Magian, while a band of nine prisoners are fastened together in a file by a cord around the neck of each; the last one wearing a Scythian cap. Sir Robert Porter, when he visited the place, imagined it was a representation of Tiglath-pileser and the ten captive tribes of Israel, one of the Levites with the sacerdotal mitre bringing up the rear! Keppel, another traveller who visited the plain of Behistun, thought it represented Queen Esther and her attendants!—notwithstanding the general Arab tradition that it was 'Darius who carved the rock,' and which the discoveries of Rawlinson have now proved true.

A portion of the long inscription reads as follows:—

I am Darius, the great King of kings, the King of Persia and the dependent provinces, the son of Hystaspes, the grandson of Arsames, the Achæmenian.

Says Darius the King: These are the countries which have fallen into my hands, by the grace of Ormuzd—Persia, Babylon, Assyria, Arabia, Egypt, Sparta, Cappadocia, Parthia, &c. &c.—being twenty-one countries in all. These countries brought tribute to me; and what I commanded, by day and night have they performed. Within these countries whoever was of the true faith, I have cherished and protected; whoever was a heretic, him have I rooted out. The rites which Gomates the Magian introduced, I prohibited. I restored to the State the chants, and the worship, and the praise of song.

Artaxerxes Longimanus, son of Xerxes and grandson of

Darius Hystaspes, carried on the same policy towards the Jews which his predecessors Cyrus and Darius had done before him. In *Daniel* ix. 25, 26, we have the famous prophecy of the 'seventy weeks,' as it is commonly termed; during which it was foretold that at the commencement of this predicted period the permission to rebuild the broken-down wall of Jerusalem would be given, and towards the close the cutting off of the Messiah, or the crucifixion of Christ, would be accomplished.

Although commentators have assumed that the time of its commencement should be reckoned either from the first year of Cyrus, or the second of Darius, or the seventh of Artaxerxes, when three decrees were issued by those sovereigns on behalf of the Jews, if we regard attentively what Scripture says on the subject, we shall see that they all refer distinctly to the building and fitting up of the Temple of Jerusalem, and not to the broken-down walls of the city, to which alone another decree, issued in the twentieth year of Artaxerxes' reign, refers, as is fully stated in the second chapter of the Book of Nehemiah.

It will be seen by a comparison of Nehemiah and Daniel, that a period of seven weeks, or *hebdomads*, and sixty-two weeks, or sixty-nine weeks in all, was to elapse from the time when the decree was given to build the wall of Jerusalem in the twentieth year of Artaxerxes unto the crucifixion of Christ. There has until lately been very grave difficulty in explaining this memorable prophecy, on which, as Sir Isaac Newton justly observed, 'the foundation of the Christian religion rested,' from the simple fact that as the common chronology places the accession of Artaxerxes B.C. 465, consequently his twentieth year would fall B.C. 444–5, and counting onwards 'sixty-nine weeks' or hebdomads, *i.e.* 483 years, according to the analogy of Hebrew numerals, we obtain A.D. 38, as the date when the crucifixion should have taken place.[1] Archbishop Ussher and Whiston strongly suspected that there was some error in computing the reign of Artaxerxes, but there was no evidence of this until the disco-

[1] To any who are interested in this complicated subject, I would refer them to my work on *The First and Second Advent*, where the whole question is examined at length.

very of a hieroglyphic inscription has happily set the matter at rest by proving beyond all doubt how exactly the prediction accords with its historical fulfilment. At Hamamat, on the Cosseir road, near the Red Sea, the old highway from Persia to Egypt, have been found memorials relating to the Persian kings. One inscription states that—

> A certain functionary named Adenes held office in Egypt six years of Cambyses' reign, thirty-six years of Darius', and twelve years of Xerxes'.

Another inscription at the same place speaks of the sixteenth of Xerxes and the fifth of Artaxerxes[1] as connumerary years. From these we learn that Xerxes must have taken his son Artaxerxes into partnership with him in the twelfth year of his reign, as Ussher had originally suspected.

Thus Nehemiah computed the accession of Artaxerxes from the twelfth year of his father's reign; the accuracy of which is confirmed by Thucydides in his *History of the Grecian War*, i. 137, and which caused Plutarch, in his *Life of Themistocles*, to say that 'The remark of Thucydides seems most agreeable to chronology.' This computation would place the twentieth year of Artaxerxes B.C. 455, when Nehemiah received his commission 'in the month of Nisan' (the time of the Passover) from the king to build up the broken-down walls of Jerusalem. From the Passover B.C. 455 to the Passover A.D. 29, are exactly 483 years, when, according to Daniel's prophecy, the time for the cutting off of the Messiah was come. Now there appears to be an overwhelming amount of evidence from history, prophecy, chronology, astronomy, and archæology combined, that the crucifixion took place, not according to the common opinion in A.D. 33, which is merely a computation of Eusebius in the fourth century, but in the year and at the Passover of A.D. 29, during the consulship of the Gemini. And as the Passover in both

[1] In examining, with Dr. Birch, Sir Gardner Wilkinson's copy of these inscriptions in the British Museum, we were puzzled at finding Artaxerxes' name in the place of Xerxes'; but on appealing to Sir Gardner himself, he was good enough to assure me by letter that it was a mistake, owing to the proof-sheets having passed through the press at Malta without having been revised by him, and that the true reading of the inscription is as I have given it above.

those years, viz. B.C. 455 and A.D. 29, occurred on the same day of the year, March 17,[1] we may safely conclude that, from the day on which Artaxerxes' decree for rebuilding the walls of Jerusalem was given to Nehemiah 'in the month Nisan' to the time when the Messiah was cut off by His crucifixion at Calvary, exactly 483 years had passed, and the prophecy was fulfilled to the day according to the word of God; and thus affording another of the many instances which have already been adduced in our search through the Old Testament of THE TRUTH OF THE BIBLE.

The New Testament of course cannot be expected to have its testimony confirmed by archæology to the same extent as the Old. Indeed, as the events which it records are so well within what scholars term 'the historic period,' it does not, of course, require it. Nevertheless, a few instances may not be inappropriately named; and since Volney, as has been already noticed, has thought fit, in the blindness of atheistical madness, to deny the existence of Jesus Christ altogether (see p. 46), let us glance at the evidence which archæology affords on the subject.

In the year 1820, the commissaries of arts attached to the French armies, while excavating in the ancient city of Aquilla, in the kingdom of Naples, discovered an antique vase of white marble, containing a copper plate with this inscription:—

In the year 17 of the Emperor Tiberius Cæsar, and the 26th day of March, the city of the Holy Jerusalem, Annas and Caiaphas being priests sacrificators of the people of God, Pontius Pilate, Governor of Lower Galilee, sitting on the presidential chair of the Prætory, con-

[1] The Astronomical Tables show that the new moon, by which the Jews, according to the Law, regulated their Passovers, fell in both those years on March 4; consequently the fourteenth day of the moon, or the day of the Passover, would fall on the 17th of March. Epiphanius, of the fourth century, says that 'the Quartadecimans kept their Pasch on the 15th of the Kalends of April, *i.e.* March 17; grounding their reasons for so doing upon certain information contained in the *Acta Pilati* respecting the day of our Lord's crucifixion.' (*Hær.* 50, *Quart.* n. 11.) I believe the proof that the crucifixion occurred during the consulship of the Gemini—which answers to the year A.D. 29—to be as sure and certain as if any English historian, wishing to record an event which happened in the year 1815, were to state that it occurred during the year on which the battle of Waterloo was fought.

demns Jesus of Nazareth to die on the cross between two thieves, the great and notorious evidence of the people saying—1st. Jesus is a seducer. 2nd. He is seditious. 3rd. He is an enemy to the law. 4th. He calls himself falsely the son of God. 5th. He calls himself falsely the King of Israel. 6th. He entered into the Temple followed by a multitude bearing palm-branches in their hands. Order of the first Centurion Quilius Cornelius, to lead him to the place of execution. All persons, whether rich or poor, are forbidden to oppose the death of Jesus. Jesus shall go out of the city of Jerusalem by the gate of Struenus.

Signatures of witnesses to the condemnation of Jesus Christ.

- Daniel Robini, a Pharisee.
- Joannes Rororanle.
- Raphdel Robani.
- Capet, a citizen.

It is impossible to say when this inscription, the most extraordinary and interesting in the records of the world, was made; though the last name, 'Capet, a citizen,' will naturally lead some to doubt its being of very high antiquity, as the descendants of *Hugh Capet*, the founder of the French monarchy, for a long period reigned in Naples, and it is not improbable that the composer would seek the favour of his sovereign by showing that a possible ancestor might be found amongst the Jews in authority before the promulgation of the Christian religion.

If, on the other hand, it be assumed to be a genuine copy of the original death-warrant of our blessed Lord, it should be remembered that 'the year 17 of the Emperor Tiberius,' when the crucifixion is said to have taken place, synchronises with A.D. 29—*i.e.* if we compute as St. Luke does, and as several other instances might be adduced to the same effect, the *commencement* of Tiberius' reign from the year A.D. 12, when he was taken into partnership with Augustus, two years before the death of the latter,[1] as Lardner in his *Credibility of the Gospel History*, chap. ii., has so convincingly proved to be the case; and 'the 26th of March' mentioned in the inscription is one of two different readings, the other being 'the 17th of March,' for the day of the month which certain Asiatic Christians

[1] Velleius Paterculus, who lived in the reigns of both the Emperors Augustus and Tiberius, says in his *History*, ii. 121:—'The Senate and the people of Rome passed a law, at the request of Augustus, giving Tiberius *equal power with himself in all the provinces*,' which law, he adds, was made just before the triumph of Tiberius on his return from Germany, A.V.C. 765 = A.D. 12.

observed as the anniversary of the crucifixion, on the authority of the *Acta Pilati*, or authentic daily records of State, which, according to Roman law, the provincial governors were obliged to keep for the use of the government at home. These two matters specified in the inscription seem to support its claims to being of very considerable antiquity, though the exact time of its manufacture we have not sufficient evidence to prove.

The inscription is engraved in Hebrew characters, and on one side of the copper plate containing it are inscribed these words:—'A similar plate is sent to each tribe.'

It is well known that the Evangelists, in recording the crucifixion, state that Jesus Christ was first scourged, and then put to death by being nailed alive to a cross, and that the Roman governor Pontius Pilate commanded this accusation to be put upon it:—

JESUS OF NAZARETH, THE KING OF THE JEWS.

We have abundant evidence from ancient authors that it was the practice of the Romans to scourge their malefactors previous to crucifying them, and then to place an inscription, either on the cross or on their person, specifying the crime for which they suffered.

Thus Cicero, in his famous speech against Verres, exclaims:—

> In the middle of the Forum of Messana, a Roman citizen, O judges, was scourged with rods; and a cross, a cross I say, was prepared for him!—Cic. *in Verr.* vii. 62.

Thus Suetonius, in his *Life of Caligula*, chap. 32, says:—

> At Rome, at a public feast, a slave having stolen some thin plates of silver, Caligula delivered him immediately to an executioner, with orders to cut off his hands, and lead him round the guests with them hanging from his neck, together with a label, on which was inscribed the cause of his punishment.

It is frequently assumed by a class of prophetic students that the Bible, which states a prophecy, records also its fulfilment; and that there is no necessity for referring to secular authors in testimony of its having been accomplished.

This certainly is not the case with regard to the most noted prophecy of the New Testament, that which our

Lord delivered concerning the destruction of Jerusalem, as related in the Gospel of St. Luke. We are obliged to refer exclusively to secular history in order to learn its accomplishment about forty years after the prediction was uttered, especially as it is set forth so graphically in the pages of Josephus, who himself was a sharer in the war and a witness of the fact.

The grateful Romans raised in honour of Titus, the conqueror of Jerusalem, that celebrated arch at Rome which bears his name, and which has remained to our day to testify to THE TRUTH OF THE BIBLE, and the most unexceptionable witness to the fulfilment of the prophetic word. For on this arch were carved, in memory of Titus' great conquest, perfect representations—1st. Of the shew-bread-table with its memorial cups and silver trumpets. 2nd. The seven-branched golden candlestick. 3rd. The Book of the Jewish Law, together with other spoils from the City and Temple of Jerusalem.[1] Over the arch, and fronting the Colosseum, the following simple inscription may still be seen, in characters as plain as when first carved:—

SENATUS POPULUSQUE ROMANUS DIVO TITO DIVI VESPASIANI F. VESPASIANO AUGUSTO.

A second inscription, which is believed to have once existed on another part of the arch, and said to have been discovered in the circus of Rome, is much longer and in a different style, which has led persons to doubt its genuineness. Whether it was ever attached to the arch is uncertain, nor is it of much importance. It states, however, that the arch was erected in honour of Titus, the son of Vespasian; and after recounting his high offices, and the number of his victories, adds that, acting by his father's counsels he had *subdued the Jews and destroyed Jeru-*

[1] In a work by the Rev. W. Knight, on *The Arch of Titus*, there are some valuable drawings of the spoils from Jerusalem, as they appeared two centuries ago. Time, however, is gradually destroying these interesting memorials from the city of David. Blondus, an Italian antiquary of the 17th century, mentions in his work *De Româ Triumphante*, that the representation of 'The Book of the Jewish Law' was extant in his time amongst the marble sculptures on the arch, though no longer visible in the present day.

salem; which had not either been attempted by any previous generals, kings, or people, or had been attempted in vain.

The reproach which the martyr Stephen brought against the Jews for their treatment of Christ under the title 'of the coming of the *Just One*' (*Acts* vii. 52), naturally leads us to enquire what idea the heathen world entertained respecting this same holy Being previous to the Christian era; to which Suetonius, in his *Life of Vespasian*, appears to allude, when he says that 'there had been *for a long period*, all over the East, a notion firmly believed, that it was fated at that time, some which came out of Judea should obtain the empire of the world.'

Five centuries before the time of Suetonius lived the great Grecian philosopher Socrates. Two of his pupils, Plato and Eupolis, who may be classed amongst those wise heathen of whom St. Paul spake as 'seeking the Lord if haply they might feel after Him and find Him, though He be not far from every one of us' (*Acts* xvii. 27), have each expressed their expectations concerning 'the coming of the Just One' in the following remarkable way.

Plato, in his *Republic*, ii. chaps. 4 and 5, thus describes him:—

> He shall be stripped of every possession except his *virtue*; stigmatised as *wicked* at a time when he exhibits the strongest proofs of goodness; endued with *patience* to resist every temptation and reverse of fortune, but inflexibly maintaining his integrity; not ostentatious of his good qualities, but desiring rather *to be good than to seem so.* Indeed, the recompense which the JUST ONE shall receive from the world is this: he shall be *scourged, tortured, bound, deprived of his eyes*, and at length, having suffered all sorts of evils, HE SHALL BE CRUCIFIED.

Nor is the language of Eupolis less striking, as his famous hymn in praise of the expected Deliverer will show:—

> Author of Being, Source of Light,
> With unfading beauties bright;
> Fulness, Goodness, rolling round,
> Thy own fair orb without a bound:
> Whether Thee thy suppliants call
> TRUTH, or GOOD, or ONE, or ALL,
> EI, or IAΩ:[1] Thee we hail,
> ESSENCE THAT CAN NEVER FAIL,

[1] The Grecian name EI, 'THOU ART,' inscribed on the Temple of

Grecian or Barbaric name,
Thy stedfast Being still the same. . . .
Thee will I sing, O Father, Jove,
And teach the world to praise and love. . . .
And yet, a greater hero far
(Unless great Socrates could err)
Shall rise to bless some future day,
And teach to live, and teach to pray.
Come, UNKNOWN INSTRUCTOR, come!
Our leaping hearts shall make Thee room;
THOU with Jove *our vows shalt share*,
Of Jove and THEE we are the care.
O Father, King, whose heavenly face
Shines serene on all Thy race,
We Thy munificence adore,
And Thy well-known aid implore;
Nor vainly for Thy help we call,
Nor can we want, for THOU ART ALL!

The Sibylline Oracles were still clearer in their witness to 'the coming of the Just One,' as St. Augustine, in his *De Civitate Dei*, says:—

In those days (B.C. 83), Sibylle of Erithræa wrote some *apparent prophecies concerning Christ*, which we have read in bad Latin verses, not corresponding to the Greek, as the interpreter, though subsequently well skilled, was not the best of poets. For Haccianus, a learned and eloquent man, who had been Pro-consul, having a conference with us concerning Christ, showed us some verses so arranged that the first letter of every verse being taken, they all made these words:—

Ἰησοῦς Χριστὸς Θεοῦ Υἱοῦ Σωτήρ.
Jesus Christus Dei Filius Salvator.
Jesus Christ, son of God, the Saviour.

In his *De Veritate*, St. Augustine quotes the Erythræan Sibyl as saying:—

He will fall into the hands of the wicked; with poisonous spittle they will spit upon Him; on the sacred back will they strike Him; they will crown Him with a crown of thorns; they will give Him gall for food and vinegar for drink. The veil of the Temple shall be rent, and at midday there shall be a darkness of three hours long. And He will die; repose three days in sleep; and then in the joyful light, He will come again as at first.

Apollo at Delphi, is supposed to be taken from the Saite inscription on the Temple of the Egyptian goddess Neith, 'I AM' corresponding with *Exodus* iii. 14, and meaning 'UNCHANGEABLE.' ΙΑΩ was the Barbaric name for Jehovah, intimating His UNITY, whence the Phœnician ΙΕΥΩ, and from thence the Grecian name ΖΕΥΣ.

Cicero, who flourished in the century previous to the Christian era, draws the following picture of the coming 'Just One,' which will show the Roman expectation at that period :—

On account of his doctrines, the Just Man will be persecuted and attacked; his hands will be cut off; his eyes put out; he will be condemned, bound with chains, exterminated, and *put to death*; he will appear in the estimation of the world to be of all men the most miserable.—*De Republicâ,* iii. 12.

St. Luke states, in *Acts* xi. 26, that 'the disciples were first called Christians in Antioch'—an historical fact which is confirmed by Tacitus, who mentions that the disciples of Christ were known by that honoured name which so soon spread throughout the civilised world. The Roman historian relates that—

Nero doomed to the most cruel punishments those people who, for their detestable crimes, were universally abhorred, and who were known to the vulgar by the name of CHRISTIANS. The founder of this name was one Christ, who in the reign of Tiberius suffered death as a criminal under Pontius Pilate, and for a while this *pestilent superstition* was quelled, but revived again and spread, not only over Judea, where this evil was first broached, but even through Rome.—Tac. *Annal.* xv. 44.

An inscription on a monument found in Portugal in honour of Nero confirms what the historian calls the 'pestilent superstition' of Christianity. It reads as follows :—

To Nero Claudius Cæsar, Augustus, High Priest, for clearing the province of robbers, and of those who taught mankind *a new superstition.—Ap. Gruter,* p. 238.

In *Acts* xvii. 1–8 special mention is made of 'the rulers of Thessalonica.' The word translated 'rulers' is literally *politarchs*, a word which is not found in any classical writer; consequently neither Lardner nor Paley were able to adduce anything relating to this subject in their works on the evidences of Christianity. Recent investigations have brought to light no less than *three inscriptions* at Thessalonica, Halicarnassus, and Philippi, where the magistrates of those cities are described under the title of '*Politarchs*.' The one on an arch at the first-named of these cities is peculiarly interesting. It is supposed to have been built by the grateful Thessalonians to commemorate the victory of Augustus and Antony over

Brutus and his associates. The inscription engraven in Greek letters on the marble arch informs us that the magistracy which the Romans recognised and allowed to subsist in the 'free city' of Thessalonica were called 'Politarchs,' and were seven in number; and it is worth noticing that three of the names on the inscription are identical with three of St. Paul's friends in this part of the world—viz. Gaius, a man of Macedonia, *Acts* xix. 29; Sosipater, or Sopater, of Berea; and Secundus of Thessalonica, *Acts* xx. 4. This inscription is given in full by Boëckh, *Syllabe*, pars x. p. 53, No. 1967; and Mr. Charles Curtis, writing from Monastir, August 8, 1867, says he has met with an inscription at that town which stands near the site of the old capital of Macedonia, which was brought from a village about twelve miles north, now called *Tchépikoo*, where those very 'Politarchs' exercised their functions according to the inscribed tablet. This is a striking testimony to the accuracy of St. Luke, the writer of the Acts of the Apostles.

In *Acts* xvii. 22, 23, St. Paul is represented when at Athens as speaking of having found an altar with this inscription, To THE UNKNOWN GOD.

Various are the opinions as to the origin of this inscription. Diogenes Laertius, who lived about a century after St. Paul, in his history of Epimenides, says, that having been invited to Athens for the purpose, he delivered the city from a pestilence in the following manner:—

> Taking several sheep, some black and others white, he led them to the Areopagus, and thence let them go where they would, and commanded those who followed that wherever any of them lay down, they should sacrifice them to the god of the place, and so the plague was stayed. Hence it has come to pass, that to this present time *altars without names* are found in the Athenian towns, in memory of the expiation then made.—*Diog. Laert.* i. § 110.

And so Pausanias, in his description of Athens, having mentioned an altar of Jupiter Olympus, adds, 'nigh unto it is an altar of *unknown gods*.' (*Paus.* v. 412.)

And the author of the dialogue *Philopatris*, supposed to have been Lucian, who lived in the second century, makes Critias swear '*by the unknown god of Athens*;' and towards the end of the dialogue says: 'Let us adore the *unknown god at Athens*, stretching forth our hands

towards heaven, and offering him our praise.' (Luc. *in Phil.* t. ii. p. 780.)

From all this we again see with what correctness St. Luke writes, when he makes St. Paul speak of an altar at Athens with an inscription To the Unknown God.

In *Acts* xxvii. we have a very full account of St. Paul's voyage to Rome, in which St. Luke says: 'when we had sailed slowly many days, and scarce were come over against Cnidus, we sailed under Crete, over against Salmone; and hardly passing it, came unto a place which is called *The fair havens*; nigh whereunto was the city of *Lasea*.'

In Smith's interesting work on the *Voyage and Shipwreck of St. Paul* (Appendix No. III.), 2nd edition, we have the result of an investigation made by the Rev. George Brown, who accompanied Mr. Tenant's yacht, *St. Ursula*, on a cruise in the Mediterranean in the winter of 1855–6, as to the correctness of St. Luke's statements respecting St. Paul's voyage on his way to Rome; and the result was most satisfactory. The party succeeded in ascertaining the exact position of *Lasea*, which bears the same name at this present day, and found '*The fair havens*,' which lies five miles west of Cape Leonda, to be 'the only secure harbour in all winds, on the south coast of Crete,' as they were informed by the health-officer who boarded their vessel. They inspected a large slab which had been found amid the ruins of Lasea on which was engraved a Latin inscription in eight lines, which in English would read thus:—

Epictetus, the freedman and notary (*i.e.* the ship-agent of the fleet) to Jupiter, highest and chief among the gods, to Serapis and all the other gods, and to the Emperor Cæsar Nerva Trajanus Augustus Germanicus Dacicus; the superintendent of the work being Dionysius, son of Sostratus of Alexandria, *master and owner* (κυβερνήτης) of the ship whose sign was Isophania, of the fleet of Theon.

The mention of the Emperor Trajan's name, who began to reign A.D. 98, shows that the date of this inscription was not long after the time of St. Paul; and viewing it critically, we find several points of union with the text of the *Acts of the Apostles*. It appears that ships from Alexandria were accustomed to make a long stay at Phœnice, an haven of Crete, as St. Luke says in ver. 12: 'if by any means they might attain to Phœnice, and there

to winter, which is an haven of Crete;' otherwise Epictetus, the owner of one, could hardly have remained long enough to superintend the inscription of the votive tablet given above. We observe also the accuracy of St. Luke's language; for we have in the inscription *κυβερνήτης* as the designation of the 'master and the owner of the ship,' as in *Acts* xxvii. 11; and *παρασήμω* as indicating the ship's name or sign, as in chap. xxviii. 11, where it is written: 'after three months we departed in a ship of Alexandria, which had wintered in the isle (of Crete), whose sign was Castor and Pollux.'

St. Paul, in his second Epistle to Timothy, mentions by name certain persons who sent their salutations to him, specifying Eubulus, and *Pudens*, and Linus, and *Claudia*.

It has been supposed by some that the *Pudens* and *Claudia* mentioned by the Apostle were the same as a young couple described by the Roman poet Martial in his Epigrams as follows:—

Rufus, she your name who bears,
Claudia, the foreign beauty,
Now the veil of marriage wears,
Vows my Pudens love and duty.
Ep. xiii. lib. iv.

Since Claudia Rufina's eyes
Report the blue of Britain's skies,
Why shows her bosom's classic grace
A peasant form of Latin race?
Ep. liv. lib. xi.

Although the Claudia mentioned by the poet was evidently a lady from Britain, who became the wife of Pudens, there is a chronological difficulty in the way of believing them to be the same persons of which the Apostle speaks. There are grounds for dating St. Paul's second Epistle to Timothy A.D. 58; and Martial, according to Clinton's *Fasti Romani*, did not arrive at Rome until A.D. 66, 'at the age of twenty-three;' and it is probable that the Epigrams in which these two names occur were written many years later. Hence we are compelled to conclude that the Pudens and Claudia of St. Paul's Epistle to Timothy are not the same as those mentioned in the Epigrams of Martial. There is, however, better evidence at hand on the same subject, which we may now consider.

In the year 1723 there was dug up at Chichester, in the county of Sussex, a stone containing a Latin inscription, partly defaced, which reads as follows, the brackets indicating the restored portions of the broken stone :—

[N]eptuno et Minervæ Templum [Pr]o Salute Domus Divinæ Auctoritate Tib. Claud. [Co]giduni Regis Legati Augusti in Brit. [Colle]gium Fabrorum et qui in eo [a sacris sunt] de suo dedicaverunt donante aream [Pud]ente Pudentini Filio. (See Horsley's *Britannia Romana.*)

This inscription shows that Tiberius Claudius Cogidunus once lived as 'king and legate of the Roman Emperor in Britain,' and whose daughter appears to have been married to a person named *Pudens*. It may be proved by a reference to Tacitus (*Vita Agricolæ*, § xiv.), that about the year A.D. 50 a British king named *Cogidunus* was appointed legate of the Emperor Claudius. According to the inscription, he must have adopted the *nomen* and *prænomen* of his patron Tiberius Claudius; and his daughter, according to Roman usage and custom,[1] would necessarily have taken the name of *Claudia*. Moreover, it would have been in accordance with the usual custom that Cogidunus' daughter should have been sent to Rome as a pledge of her father's fidelity; and placed under the protection of Pomponia, the wife of Aulus Plautius, at that time general of the Roman armies in Britain. Further, we learn from Tacitus (*Annal.* xiii. 32) that Pomponia was accused of having 'adopted a *new and foreign superstition*,' on the return of her husband to Rome, A.D. 57. There can be little doubt but that this 'new and foreign superstition' referred to the Christian religion, as we have already seen, from an inscription found in Spain of the age of Nero, it was then so called, and which, as we know from St. Paul's Epistle to the *Philippians* i. 13, and iv. 22, had made its way into 'Cæsar's household.'

It is not improbable to suppose that Pomponia should have been instrumental in bringing her *protégée* Claudia, the daughter of Cogidunus, to adopt the same faith, and who therefore, from their high position, formed a portion of, or were connected with, 'the saints of Cæsar's house-

[1] Smith's *Dictionary of Antiquities*, p. 640.

hold,' who sent their salutations to the Church at Philippi by St. Paul, when writing that Epistle during his 'two years'' imprisonment at Rome, A.D. 56–58.[1] Finally, as we find in the stone inscription the name of *Pudens, the son of Pudentius*, associated with Cogidunus, the father of Claudia, in a way which corresponds with the hypothesis that he was son-in-law to this tributary British king, it is not impossible but that these two persons, *Pudens* and *Claudia*, are the very same which St. Paul mentions as sending greetings to Timothy when writing to him from 'his own hired house' at Rome.

Such is the evidence from *Archæology* in confirmation of THE TRUTH OF THE BIBLE, and that more will eventually be discovered as further researches are made in countries once the scene of the great events recorded in Scripture we can scarcely doubt, considering how many inscriptions have been brought to light within the present age, as well as the increasing numbers of travellers in those lands, like Egypt, Babylon, and Canaan, so rich in antiquarian lore. The effect of these 'sermons in stones' upon the minds of those who are open to conviction is gradually increasing, and will be, we cannot doubt, overruled for good. The testimony of those who have seen with their own eyes the present condition of countries, where the power and miracles of Jehovah were exercised on behalf of His chosen people, is most satisfactory. To go back to the most remote periods for events recorded in Scripture, let us consider the evidence of one who has recently visited the scene of God's judgments upon Sodom and Gomorrha in the time of Abraham, or nearly 4,000 years from the present day.

It is for the learned, says Commander Lynch, to comment on the facts we have laboriously collected. Upon ourselves the result is a decided one. We entered upon this sea (the *Dead Sea*) with conflicting opinions. One of the party was sceptical, and another, I think, a professed unbeliever in the Mosaic account. After twenty-two days' close investigation, if I am not mistaken, we were unanimous in the conviction of the truth of the Scriptural account of the destruction of

[1] See my *Introduction of Christianity into Britain*, p. 95, in which I have endeavoured to show that such is the true date of St. Paul's 'two years'' imprisonment 'in his own hired house' at Rome.

the cities of the plain.—*Narrative of the United States' Expedition to the River Jordan*, chap. xvii. p. 253.

Nor is the evidence of another Eastern traveller from the Far West less decisive on the subject:—

I would, says Mr. Stephens in his graphic account of the ancient Petra, the capital of Edom, that the sceptic could stand as I did among the rocks, and there open the sacred book and there read the words of the inspired penman, written when this desolate place was one of the greatest cities in the world. I see the scoffer arrested, the cheek pale, his lip quivering, and his heart quaking for fear, as the ruined city cries out to him in a voice loud and powerful as that of one risen from the dead; though he would not believe Moses and the prophets, he believes the handwriting of God Himself in the desolation and eternal ruin around him.—Quoted in Murray's *Truth of Revelation*, p. 87.

And so that distinguished explorer of the ancient kingdom of Egypt:—

All that we find, says Sir Gardner Wilkinson, relating to the Jews, and all that Egyptian monuments offer, whether in matters of religion or history, tend fully and satisfactorily to confirm the Bible account; and if it is seldom that these monuments treat of the same historical points as the Scriptures, yet whenever that is the case, we are delighted to find them perfectly in accordance with the Sacred Volume.—*Ibid.* p. 106.

Enough has been adduced concerning the several subjects which have engaged our attention,—such as the Mosaic Cosmogony—the Origin and Antiquity of Man—the Science of Scripture—and the Archæology of Egypt and other ancient kingdoms of the earth—to warrant our belief and contention that the Bible contains the Truth, the whole Truth, and nothing but the Truth—contrary to the bold denial of the same by the leading organ of the Rationalistic school in this country. For thus it denounces that blessed Book of books, which contains the revealed will of God to man, and which is so lovingly regarded by every sincere Christian in the present day:—

It must never be forgotten, says the *Westminster Review*, that the most monstrous of Christian superstitions, the most grotesque of Christian miracles, and the most inhuman of Christian dogmas find their prototype in the books of the Old and New Testament—that medley of documents, which, with much that is true, pathetic, and sublime, *contains not a little that is false, inhuman, and immoral.*—*Westminster Review* for October, 1865, p. 350.

As a pleasant contrast to this onslaught upon Scripture, let us hear the wiser words of a writer in one of the

popular magazines in the present day, who thus frankly places the subject in dispute before his readers :—

Is the Bible infallibly inspired? Bacon and Newton thought so; and if so, the Almighty actually spoke during a succession of ages through the mouths of the Jews. Is the Bible uninspired? Name, then, another race whose chief literary monuments, brought together into a single collection, could serve for moral guidance to the most civilised nations of Christendom, and be accepted as beyond comparison the best collection of religious writings in existence by Lessing and Goëthe, by Sir William Hamilton and Mr. Carlyle, by earnest men of all creeds and no creed. Try to make a Bible out of the literature of Rome, and see how it will look beside the Old and New Testament.—*St. Paul's Magazine* for November 1868.

However much, therefore, the Rationalists of to-day may advance their claims to a hearing as the only instructors worth listening to in this restless age of progress and Science,[1] whenever they propose a theory, however plausible, which is opposed to the plain Truths of the Bible, we are bound by the strongest obligations to combat their pretensions and to reject their creed. Chalmers' test of instructive evidence is plainly applicable on such an occasion as this—'Where the truth-loving spirit is not, the truth itself cannot come.'

The best and indeed the only remedy for the sin of unbelief, which is making such fearful inroads upon the weak and unstable in the present day, is to be found in those holy Oracles, which are sufficient to make men wise for time and eternity. We see, then, the value of the Bishop of Exeter's declaration, to which reference has been already made at the commencement of this work—that 'God's creation is a new book to be read by the side of His revelation, and to be interpreted as coming from Him. And that in learning this new lesson Christendom needed a firm spot on which she might stand, and has found it *in the Bible*.'

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[1] One of the leading journals of America, *The New York Herald*, affords a lamentable specimen of this mode of reasoning regarding Scripture and Science. In a series of sermons commenced in its columns towards the close of 1869, it declares, amongst other things equally wild, that '*Modern Science*, in its appliances to the good of mankind, is "the handful of corn in the earth upon the top of the mountains;" and that the *Electric Telegraph*, in a network of wires all over the globe, is the *chain* which will bind "that old Serpent the Devil" for at least 1,000 years!'

It would be well if those who are continually fancying that they have detected some discrepancy between Scripture and Science, were satisfied with this definition of the proper use of the Bible, in place of evoking their own interpretation of the light of Nature to override the light of Truth.

This 'light of nature,' or, as some now consider it, the exercise of the conscience, when it is enlightened by the Spirit of God, is, as Arminius called it, 'a Paradise indeed,'—*i.e.* a conscience not only quick to discern what is evil, but to shun it likewise, just as the eyelid naturally closes itself against a grain of dust. For conscience is indeed a most valuable monitor when it is allowed fair play; but, like a legitimate monarch, when overborne by passion or unhinged by prejudice, it may be too often dethroned. If, to adopt the language of the Psalmist, we could 'take to ourselves the wings of the morning, and dwell in the uttermost parts of the sea,' conscience, like the Omnipresent God, would be ever with us, for our happiness or our misery. If, to continue the metaphor, we say, 'The darkness shall cover us, and the night shall be light about us,' in regard to Him to whom 'darkness and light are both alike,' conscience would never leave us. We cannot escape its power, or fly its presence. It is ever with us in this life, will be ever with us at its close; and in that solemn scene which yet lies farther onward, when the thoughts of all hearts shall be revealed, we shall still find it face to face with us, to reprove us wherever it has been violated, and to console us so far as grace may have enabled us to profit by it.

The Scriptures, then, in all their purity, simplicity, and perfection, such as they emanated from the Divine Will, when 'holy men of old spake as they were moved by the Holy Ghost,' without any emendation, addition, or subtraction on the part of boasting critics in the present day, are the only offensive and defensive weapons of any use to man in the war which all the baptised have to wage against 'sin, the world, and the devil.' For they alone can convince without controversy, can convert without excitement, and build up the spiritual temple in the soul of the penitent sinner without the noise of human instru-

mentality; as Bishop Heber describes the material Temple on Mount Zion in his poem on *Palestine*:—

> Then tower'd the palace, then in awful state,
> The Temple rear'd its everlasting gate:
> No workman's steel, no ponderous axes rung!
> Like some tall palm the noiseless fabric sprung,
> Majestic silence!

Powerful indeed is the very silence of THE BIBLE; simple in all its grandeur, and grand in all its simplicity. And herein is seen the wide gulf which separates those who bow in humble submission to the supremacy of God's Word in all things, and those whose unceasing effort seems to expend itself in some presumed contradiction of Scripture to the discoveries of modern times. Whereas the one point with reference to the fact that wherever Science has discovered anything alluded to in Scripture, it accepts such as an incidental proof of the harmony which must ever exist between the word and the works of God, the other, imagining that it has detected a discrepancy between the two, loudly asserts that they contradict each other, contenting itself with a mere denial without deigning to offer any proof of the same.

It is surely more becoming our Christian profession to be satisfied with observing the skill, the power, and the wisdom of God in the works of Creation; and when we have learnt all within our ken, to confess the magnitude of our ignorance respecting the manifold wisdom of Jehovah in the spirit of that great philosopher Sir Isaac Newton, whose humility and genius were alike conspicuous in his memorable avowal:—'I am but as a child standing on the sea-shore of the Ocean of Truth, and playing with a little pebble which the waters have washed to my feet.' Or as Kepler so beautifully expresses the same idea in his work on *The Harmony of Worlds*:—

> I thank Thee, my Creator and Lord, that Thou hast given me this joy in Thy creation, this delight in the work of Thy hands. I have shown the excellency of Thy works unto men so far as my finite mind was able to comprehend Thy infinity. If I have said aught unworthy of Thee or aught in which I may have sought my own glory, graciously forgive it.

There are lengths and breadths, and depths and heights, both in the word and the works of God, which will require

an eternity to fathom; and it is a melancholy sign of the progress of unbelief in the present day, when we find some who claim to be ministers of Christ, and even one whose office presupposes him 'worthy of double honour,' passing over to the ranks of the enemy in place of 'contending earnestly for the faith which was once for all delivered to the saints.'

The work of Him who inspired the saints of old to write the Truth, the whole Truth, and nothing but the Truth, when conveying God's message of love to a lost and ruined world, as seen in the awakening, sanctifying, and guiding everyone who desires to share the inheritance of the blessed above, and contrasted with anything like that appeal to reason, or the verifying faculty, according to the practice of many in the present day, may be truly characterised as the grand Evangelical and Catholic doctrine of all time. Until that great but elementary truth is understood, there can be no perception of the motive power which actuates the faithful of all ages and in all places. The manner and way of the Spirit's influence upon the soul is truly mysterious, and which none can unveil. As the dew, which appears in the stillness of the night, is found in the morning hanging upon the leaves and enriching the arid soil, and we naturally wonder whence it came, and who hath begotten it, so is the way of the Spirit's dealing with the soul of man. To the heart of the awakened penitent sinner hath this testimony been borne, and as Scripture teaches, 'the record is that God hath given him eternal life, and this life is in His Son.'

How contrary such doctrines are to the Rationalism or Neo-Theology of the present day, let the following utterances from that school of thought decide. Thus, when the *Essays and Reviews* first appeared, one of their leading periodicals declared that—

> It sets aside the old theology entirely, and propounds *the rational views of Paine and Voltaire,* with just that mixture of cloudiness which you might expect from persons who, while they see the folly of the old superstitions, yet remember that they are clergymen, and feel that they are but partially independent and free. We are on the eve of a great religious revolution. But few of the high and mighty ones speak so freely as we do, but they think freely. Many of our great writers cling to the doctrine of God and of a future state; *but*

they have no more faith in the Divine authority of the Bible, or in the supernatural origin of Christianity, than ourselves.—*National Reformer*, November 24, 1860.

In a similar strain, one of the leaders of the Rationalistic school in Germany says:—

No one believes any longer in any of the New Testament miracles—to say nothing of those of the Old—from the supernatural conception to the ascension. . . . Why not then boldly speak out at once? Why not confess to one another that we can no longer recognise *in the Bible anything more* than a mixture of poetry and fact? But it may be asked, ought we in that case still to be called Christians? I know not. But of this I am certain that we shall then become once more true, honest, unsophisticated, and therefore better men than before. Moreover, we shall remain Protestants—yea, then *for the first time real Protestants.*—Strauss, *On the Select Dialogues of Ulrich von Hutten*, Vorrede, p. xlix.

Contrast this enmity to the Bible with the expression of opinion on the same subject by one of Germany's most distinguished scholars:—

In my opinion, wrote the illustrious Niebuhr, he is not a Protestant Christian who does not receive the historical facts of Christ's early life, in their literal acceptation, *with all their miracles*, as equally authentic with any event recorded in history, and whose belief in them is not as firm and tranquil as his belief in the latter; who does not consider every doctrine and every precept of the New Testament as undoubted divine revelation, in the sense of the Christians of the first century, who knew nothing of 'Theopneustia.'—Niebuhr's *Life and Letters*, ii. 123.

Even the noted infidel Rousseau has left a testimony to the value of the Bible, which declared opponents, like Strauss, or professing Christian ministers like Bishop Colenso, might profitably consider:—

The majesty of Scripture strikes me with admiration, as the purity of the Gospel has its influence upon my heart. Peruse the works of our philosophers; with all their pomp of diction, how mean, how contemptible are they compared with the Bible! Is it possible that a book at once so simple and so sublime should be merely the work of man? The Jewish authors were incapable of the diction and strangers to the morality contained in the Gospel, the marks of whose truth are so striking and inimitable, that the inventor would be a more astonishing character than the hero. What sublimity in His maxims! What wisdom in His sermons! What truth in His replies! Where is the philosopher who could so live, or without weakness and ostentation could so die?

Or take the testimony of one of an entirely opposite school—the celebrated John Henry Newman, respecting

the value and importance of our English Bible, which has been so happily defined in the *Preface* to the Authorised Version as opening the window to let in the light—breaking the shell that we may eat the kernel—putting aside the curtain that we may look into the most holy place—removing the cover from the well that we may come by the water of life, and taste, and drink, and live for evermore.

Who will not say, asks Dr. Newman, that the uncommon beauty and marvellous English of the Protestant Bible is not one of the great strongholds of *heresy*[1] in this country? It lives in the ear like music that can never be forgotten, like the sound of church bells which the convert hardly knows how he can forego. Its felicities seem to be almost *things* rather than mere words. It is part of the national mind, and the anchor of national seriousness. The memory of the dead passes into it. The potent traditions of childhood are stereotyped in its verses. The power of all the griefs and trials of a man is hidden beneath its words. It is the representative of his best moments, and all that there has been about him of soft, and gentle, and pure, and penitent, and good, speaks to him for ever out of his English Bible. It is his sacred thing, which doubt has never dimmed and controversy never soiled. In the length and breadth of the land there is not a Protestant with one spark of religiousness about him whose spiritual biography is not in his Saxon Bible.—See *Dublin Review* for June 1853.

Such is the affecting admission of a highly gifted man after his fall to the value of that Blessed Book, which, to use the language of the profound Locke, has 'God for its author, salvation for its matter, and truth without mixture of error for its end.' The Bible, then, contains everything necessary for man to know, and by man to be performed. There is no portion of the Bible—no clause—no word—but it is written for our instruction; as every sentence of it comes from God, and every individual is

[1] M. Jules Simon, speaking recently in the *Corps Législatif* respecting Protestant marriages, bears testimony to the value of that Book, which Dr. Newman and others call 'the way of heresy,' just as the opponents of St. Paul did in the days of the Apostles. 'I have tried,' he says, 'to account for the circumstance, that reading, once acquired, remains longer in the mind of a Protestant than in that of a Catholic; and this is what I believe to be the reason. It is because *the Protestants have always a Bible.* Go into a Protestant household, and you are sure to find *a Bible* there. Go to a marriage in a Protestant temple; when the religious ceremony is over, the pastor takes from the table *a Bible,* and presents it to the newly-married pair, in the name of the community of the faithful.'

interested in the meaning thereof. Like the heathen fable of a golden chain suspending the world from the throne of Jove, every sentence of the Bible is a link in that more precious chain of gold, which binds all the faithful to the heart of God. Leaving the Bible in order to take up with the writings of fallible men, however intellectual or even devoted they may be, is like Adam's expulsion from Paradise to the ground full of thorns and thistles, from which food can alone be extracted with labour and toil, while that which is unwholesome and imperfect must be separated from that which is nutritive and good. These Scriptures are the true golden mines in which alone the lasting treasures of eternity are to be found, and therefore worthy of all the toil we can bestow upon them. And though we may see but little of the rich ore of virgin gold which bespankles every part of the Bible, it is our bounden duty to be unceasingly searching for it. Just as it is with the rubbish drawn from the bowels of the earth by the laborious miner; to the unpractised eye there is apparently nothing but stones and dirt, while in reality it contains particles of the purest gold; even so is it with these unsearchable riches which lie hid in every vein and verse of the oracles of the living God.

The fatal mistake of the 'wise of this world'—of those who are content with natural in place of spiritual religion—in their treatment of THE BIBLE, may be summed up in that expressive sentence of St. Paul: 'With the heart man believeth unto righteousness, and with the mouth confession is made unto salvation.' He who denies the corruption of the human heart as the result of Adam's fall, places naturally the head and intellect foremost in his standard of religious truth. But in order to make the wisdom of the Bible our wisdom, and its spirit our spirit, and its language our best loved and best understood language, there must be a higher influence upon the soul than what lies in human skill or human explanation. Until this is brought to pass, the doctrines of the Atonement and of the Resurrection, the doctrine of our fellowship with the Father and His Son Christ Jesus, and the doctrine of our growth in grace, will, as to his own personal

experience of its meaning, remain so many hidden mysteries or so many vain and empty sounds.

All who are divinely taught of Him, whose special attribute it is to take of the things of Christ and show them unto us, will enter into these views. For in what does that blessed communion and fellowship with God consist, which is the necessary result of the Scriptures being received in the heart, but in God's favour and enjoyment of His people and their joyful obedience to His will, according to the principles of the ministry of reconciliation? He who is destitute of this knows nothing of the real TRUTHS OF THE BIBLE, whether spiritual or critical, or of its great and glorious design. Such an one may discuss its evidences, may speculate upon its doctrines, may master its intellectual beauties, and may even observe its outward laws and institutions; but as long as he is without its immortalising fruit-bearing principles he is ignorant of its power; he is not 'wise unto salvation;' he can only be compared to a man amusing himself with the leaves instead of feeding on the fruits of the TREE OF LIFE.

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